PERSONNEL

November, 1956

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The Executive as Leader
Personnel Staff and the Line Organization
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Making Managers Out of Engineers
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Industrial Relations Research at Universities, Part II

The National Journal of Personnel Management

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Industry's "Hidden Payroll": How It Has Grown

THOUGH NO GENERAL agreement on what constitutes a fringe item seems to have been reached, no one disputes that fringe benefits, however defined, take a large bite out of industry's purse. That the hidden payroll has, in fact, become one of the major costs of doing business is once again underscored by the fifth biennial survey of non-wage expenditures of the Chamber of Commerce of the United States.*

The average cost of fringe benefits in 1955 among the 1,000 companies covered by the survey was $819 per employee, or 20.3 per cent of payroll—conclusive evidence, as the Chamber notes, that the wage bill is no longer an accurate measure of labor cost.

Expenditures for fringe benefits were unevenly distributed, however, ranging from 5 per cent to over 50 per cent of payroll, with the top 10 per cent of companies paying $1,297 per employee per year, or 30.6 per cent of payroll. Some firms paid only the minimum required by law, while, at the other extreme, one chemical company made annual benefit payments averaging more than $2,100 per employee—over 50 per cent of payroll.

Payments varied also according to type of industry and company size. On the average, payments were higher in non-manufacturing industry than in manufacturing. In most industries, benefits tended to be higher than average for large firms, and lower than average for small firms, though the correlation did not hold in all cases.

A measure of the rapid rate of growth in fringe benefits over the past few years is afforded by the fact that expenditures for 124 companies responding to all five of the Chamber's surveys more than doubled from 1947 to 1955, rising from $447 per employee per year to $954, or from 15.1 per cent of payroll to 21.7 per cent. While payments legally required of employers did not change significantly over this period, pension and other agreed-upon payments rose from 4.4 per cent of payroll to 6.8 per cent, and payments for rest periods or other time not worked increased substantially as well—from 6.5 per cent to 10 per cent of payroll. Also worth noting is the tendency for industries paying a high proportion of payroll for fringe benefits to increase their payments slightly more rapidly than industries paying a lower proportion.

Fringe items included in the Chamber's study are social security and other payments required by law; pension and other agreed-upon payments; paid rest, lunch, travel, and similar periods; paid vacation, sick leave, holidays, etc.; and profit-sharing, bonuses, and similar items.

* *Fringe Benefits—1955*. Chamber of Commerce of the United States, Washington, D. C., 1956.

Technical Salaries: AMA's Latest Survey

WHILE PROFESSIONAL SALARIES are admittedly rising somewhat faster than those of other groups, the increase is hardly near the point of disrupting internal pay scales—according to a new survey conducted by AMA's Executive Compensation Service.

Engineers and scientists are now earning, on the average, about 8.6 per cent more than they did in 1955, the survey finds—a figure that is not conspicuously at odds with the over-all increase of 5.3 per cent reported in the ECS 1956 survey of middle-management salaries.

The new survey's findings,* which cover more than 31,400 engineers, scientists, and administrative personnel in 49 different categories, would also seem to dispel another current notion—that starting salaries are skyrocketing as a result of the increasingly fierce competition in campus recruiting. Equally large increases are reported for higher-level as for entrance jobs, and the average increase in the range minimums (6.3 per cent) is practically identical with that of the maximums (6.2 per cent).

The 235 companies that participated in the survey include manufacturers of durable and non-durable goods in 33 industrial classifications, as well as other representative employers of technical and professional personnel such as airlines, construction companies, utilities, and transportation undertakings. In size, they range from under 100 employees to over 30,000.

It is of interest to note that, though some other ECS reports have shown that larger companies tend to pay higher salaries, company size appears to exert no influence on the amount of compensation paid to professional employees. All companies, regardless of size, appear to pay about the same for the same level of responsibility; the larger ones simply employ larger numbers of the same type of personnel.

The survey also shows that, by and large, engineering and scientific personnel do not participate in incentive compensation plans designed for top and middle management. However, 20 of the 235 companies have incentive plans which embrace their technical personnel, and another 12 have plans which extend down to the upper levels of technical supervision. An additional 10 per cent report some form of profit-sharing plan covering either all employees or all salaried employees.

* The reports of AMA's Executive Compensation Service are issued to subscribers only and are not available through libraries or other general sources of information. For subscription details, write The Director, Executive Compensation Service, American Management Association.

Union Members and Unionism

DO UNION MEMBERS believe that they enjoy better wages and working conditions as the result of the union's efforts on their behalf? Are they satisfied with the way their union is run—or do they feel that the national union interferes too much in local affairs? Some interesting light on these and a number of other questions designed to explore the attitudes of union members toward unionism is thrown by a recent study* carried out as part of the University of Minnesota's union research program.

Of the 1,251 union members from 13 union groups covered by the study, 841 were from the rank and file and the remainder union officers. As might be expected, a noticeably higher proportion of the latter group was more favorable toward unionism in all its aspects than the rank and file. Nevertheless, over 60 per cent of the rank and file members gave favorable responses to questions about the value and necessity of unions, and their local union in general.

On the other hand, only 44 per cent of the rank-and-file respondents expressed satisfaction with local union policies and practices, while items con-

* Walter R. Uphoff and Marvin D. Dunnette, *Understanding the Union Member*, Industrial Relations Center, University of Minnesota, Minneapolis, Minn., 1956.

cerned with national union activities elicited an even less favorable response: Only 40 per cent, for example, disagreed outright with the statement, "Our national union takes its share of our dues but gives us very little help."

In general, "pro-unionism" was found to increase both with years of union membership and with age, though slight decreases in the degree of favorableness were noted after 60 and in respondents with over 15 years of membership.

A fuller report on the findings of this study will be published in the January issue of PERSONNEL.

Worker Facts and Figures: A New Source-Book

WITH ALL DUE RESPECT to the indispensable publications of the U.S. Department of Labor, it must be admitted that, for the most part, they seldom make easy, still less entertaining, reading. This, no doubt, is as it should be. Government reports, after all, are not meant to while away an idle half hour. In fact, it can be argued that they are not primarily intended to be read at all, but rather to be referred to when needed—and that it is nobody's fault but the reader's if he doesn't know where to look.

On this score, there is nothing amiss with the Department's publications except that there are a whale of a lot of them. Even their strongest admirers must sometimes have wished that there were some short cut through the constantly proliferating maze of facts and figures. Evidently this problem has been bothering the Department, too. Last month, it provided its own answer to it in the shape of a remarkable 450-page volume entitled *The American Workers' Fact Book*.

This "simplified source of information for persons interested in labor matters" constitutes something of a landmark in official reporting. Simply and clearly written, and illustrated with a number of drawings and charts, it contains a vast amount of background material to which the personnel man can now turn for ready reference—and which he may well find himself reading for its own intrinsic interest.

Leafing through it, for example, he might note the basic changes in the structure of the labor force over the past half century and the diversity of factors that now shape employer-worker job relationships. The increasing share of fringe benefits in labor income, trends in collective bargaining, training practices in industry, changes in living standards and family expenditure patterns, the employment problems of older workers and the physically handicapped, labor legislation, job and old age security all find a place among the 380 different topics covered in the book. Copies may be obtained from the U.S. Government Printing Office, Washington 25, D.C., price $1.50 each.

The Older Worker Under Collective Bargaining

WHAT PROTECTION is afforded the older worker—in getting a job, or in keeping a job—under current union-management agreements? Some new information on this question is provided in a recent study by the Bureau of Labor Statistics,* one of a series dealing with the employment problems of older workers.

Specific provisions relating to older workers are infrequently found in collective bargaining agreements, the study discloses. Of 1,687 major contracts—covering approximately 7.5 million workers and including virtually

* *Older Workers Under Collective Bargaining: Part I—Hiring, Retention, Job Termination.* Bureau of Labor Statistics, Washington, D.C., 1956.

all major agreements (over 1,000 workers) in the United States—only 76 contain clauses requiring or encouraging the hiring of older workers, and only 212 make special provision for retaining older workers on the job. Almost all contracts, however, afford some protection, whether general or specific, against discharge for reasons of age alone.

The most common type of clause concerning hiring is one banning discrimination on the basis of age or the setting of maximum age limits for hiring new employees. A close second is the "ratio clause" requiring the employer to hire older workers in some specified proportion to the total work force. This practice is particularly favored in the construction industry where unions, lacking seniority provisions, have sought by other means to obtain job security for their older members. Among other contract provisions are wage-rate concessions intended to encourage the hiring of older job-seekers and the designation of specific jobs to be reserved for the older worker.

Once the worker is on the payroll, some measure of job, wage, and health protection is usually afforded by general provisions in the agreement such as seniority provisions—the most effective measure developed by unions, the study notes, to protect the job security of long-service employees—and the various forms of fringe benefits. Besides these general provisions, however, some contracts provide specifically for the transfer of older workers to lighter jobs, for special rate-setting procedures, for part-time employment, and for other exemptions favoring the retention of older employees.

In none of the contracts examined was age mentioned as a cause justifying discharge, though one agreement permitted discharge at age 65, if the worker was unable to perform his duties. In about one-sixth of the agreements, provisions for severance allowance or supplementary unemployment benefits, most of which take length of service into account in computing payments, mitigate the effects of losing a job.

New Campus-Recruiting Aid

A COMBINATION of the 35-mm colored slide and the tape recorder has been developed by the University of Utah to provide an inexpensive audio-visual aid for use in campus-recruiting programs.

Describing the new device at AMA's Fall Personnel Conference, Mr. Herald L. Carlston, Director of Placement at the University of Utah, explained that the slides are photographed and arranged in story sequence, and a descriptive narrative, prepared to coincide with the pictures, is recorded on magnetic tape. Automatic synchronization is achieved by the slide-sound equipment used: Inaudible impulses recorded on the tape trip the projector at the right mommment.

Because of the general availability of the 35-mm camera and the tape recorder, no professional skill is needed to prepare a slide-sound message and the automatic synchronization makes presentation equally simple, Mr. Carlston pointed out. If shown before the campus interview, the message relieves the recruiter of the laborious task of repeating his story to each applicant and allows him more time to get acquainted with the candidates and to answer their questions.

Companies interested in obtaining further details about the device should write Mr. Carlston at the University of Utah, Salt Lake City.

. . . Since 1952, the University of Minnesota's annual surveys of expenditures on major staff functions have furnished some significant yardsticks for personnel executives interested in comparing their own departmental costs and staff requirements with those of other organizations. Here are the findings of the 1956 survey.

How Much Should an Employee Relations Program Cost?

DALE YODER and ROBERTA J. NELSON

Industrial Relations Center
University of Minnesota

IN A SENSE, this report does not answer the question posed by its title. It does, however, offer evidence that the administration of current employee relations programs[1] costs about four cents per employee for each working hour. It also indicates that these costs now average three tenths of 1 per cent of the dollar volume of sales—and are continuing to increase. The most costly activities are those of health and safety programs and employee benefits and services.

The report covers the major findings of the fifth annual budget survey undertaken by the University of Minnesota Industrial Relations Center. It shows what firms are spending for each major activity or function performed by today's employee relations divisions. As such, it may provide some useful current yardsticks with which the reader can compare costs in his own organization.

The data reported here have been compiled from responses to questionnaires mailed to all employee relations directors on the Center's mailing list. This year's total of 269 returns is a somewhat larger sample than has been available in earlier years.

Whether or not the sample is representative of current practice throughout the country, in terms of industry representation, size of firms, and geographical location of respondents, it has been consistent from year to

[1] The term "employee relations programs," as used throughout this report, covers the 14 functions or activities listed in the accompanying exhibits and tables.

NOTE: The authors wish to express their appreciation to Miss Lois Erickson, supervisor of the Tabulating Research Laboratory of the University of Minnesota, for her help in the tabulation of returns.

FUNCTIONS	1. Functions Performed (Check)	2. Number of Staff Members	3. Total Expenses	4. Trust or Transfer Charges
1. Departmental administration: administrative direction of the personnel and labor relations program.				1.
2. Planning: policies and practices; developing programs; revisions in organization.				2.
3. Staffing: job analysis (may include time and motion study); recruitment; selection and placement.				3.
4. Training: all types.				4.
5. Promotion and transfer: termination, severance pay, exit interviews.				5.
6. Personnel rating: periodic evaluations of employee performance and potential.				6.
7. Labor relations: collective bargaining, negotiation, contract administration, and handling grievances.				7.
8. Employee benefits and services: oral and written communications (publications, suggestion systems, bulletin boards, conferences, etc.); counseling, legal aid, and other technical and professional assistance; pensions, insurance, recreation, hospitalization, sick leave, unemployment compensation, etc.				8.
9. Health and safety: safety programs, physical examinations, nursing services.				9.
10. Wage and salary administration: wage surveys, payroll management, etc.				10.
11. Records and reports: records for all activities, reports on work of the division.				11.
12. Audit and review: evaluation of current policies, programs, and practices.				12.
13. Research: studies of current policy and practice; participation in research studies.				13.
14. Overhead and miscellaneous (all other expenses).				14.
TOTAL				

EXHIBIT I

Survey Questionnaire

Detail

Column 1. Functions Performed. Check (√) the functions which are performed by the personnel and/or labor relations department for which you are reporting.

Column 2. Number of Staff Members. Think first of the total number of full-time staff members whose services are required. Then, for each function checked in Column 1, calculate or estimate the amount of their time that is used on each function. For example, if one full-time person spends all of his time and another full-time person spends half of his time on wage and salary administration (function 10) put 1.5 in Column 2 opposite this activity.

NOTE: The organization chart on the back page illustrates the industrial relations or personnel staff positions which should be included in the total.

The total of Column 2 should represent the total number of professional, technical, and clerical salaried staff members in your personnel or industrial relations department.

Column 3. Total Departmental Expenses. Allocate the *total annual expenses* of your department *(salaries plus administrative expenses)* to each of the functions performed.

Administrative expenses include such items as travel, telephone, drafting services, tests, printing, training materials, periodicals, professional library, consulting fees, advertising costs, infirmary supplies, safety clothing, entertainment, etc.

NOTE: Trust or transfer items charged to your department but not subject to your control should be reported separately in Column 4.

Column 4. Independent Trust or Transfer Charges. Allocate to each function the charges for items which are beyond the control of the industrial relations department but are included in the departmental budget.

Examples are wages paid employees for training time, time spent in negotiation, grievance settlement, safety or security training; cafeteria subsidy; wages of plant guards, janitors, etc.; pensions; premiums for group insurance, hospitalization; employees' holiday and vacation pay; contributions and gifts; nonprofessional association dues; library for other departments.

EXHIBIT I (Continued)
Survey Questionnaire—Instructions

year, and thus permits some reasonable generalizations about time-to-time changes. Further, it may be noted that the sample is much like the larger panel of firms represented in the Center's annual surveys of personnel ratios and salaries.[2]

Scope of the Survey

Firms of all sizes are represented in the data of this report. The smallest reporting firm employs 120; the largest, 55,100. The distribution may be summarized as follows: under 500 employees, 45 firms; 500 to 1,000 employees, 55 firms; 1,000 to 5,000 employees, 119 firms; 5,000 to 10,000 employees, 33 firms; 10,000 or more employees, 17 firms.

The central portion of the questionnaire is shown in Exhibit 1. The instructions shown on the opposite page may answer in advance many of the common questions that arise when these reports are released. The reverse of the questionnaire (not shown) provides for information on the title of the respondent, the industry group, the number of employees, and answers to two new queries about single-plant or multi-plant operation and dollar volume of sales.

A few methodological notes may be appropriate. The term "average" throughout this report refers to the median. The median is used as a measure of typicality, rather than the arithmetical average or mean, because the median is less influenced by extremely high or extremely low items. The median is the central item in an array of all items from low to high. The mean or arithmetical average is used only in the estimate of total program costs for all firms. The simple average is used here to facilitate comparisons with previous reports. Because this one figure is an arithmetic mean, this average total cost does not exactly equal the sum of functional costs, which are medians. To obviate numerous inquiries, it should be emphasized that this is neither a discrepancy nor an error.

Frequent reference is made to the third quartile, Q_3, and to the "interquartile range." The third quartile is the item that falls three-quarters of the way from the low to the high in an array. The interquartile range is the range from the top of the lowest quarter to the bottom of the highest quarter; in other words, it is the central half of all items which have been arrayed from low to high.

The reader wishing to compare his costs and personnel ratios with the "average" or "typical" firm can use median costs and ratios. If he prefers a yardstick representing what may be regarded as typical for the more costly and better-staffed programs, he should use Q_3, since this is the central item in the upper half of all those reported.

It should also be mentioned that the returns showed wide variation in the detail reported. Many respondents were able to, and did, provide a complete schedule. Others could not make some of the breakdowns suggested by the questionnaire. A few provided only total figures on staff and funds. As a result, the totals included in each

[2] Two observations should be made with respect to this comparison. First, readers should understand that respondents determine their own industry classification by marking a checklist. Second, details of the 1956 ratios and salaries study and references to earlier reports will be found in Dale Yoder and Roberta J. Nelson, "Industrial Relations Salaries and Ratios, 1956," PERSONNEL, Vol. 33, No. 1, July, 1956, pp. 6-18.

phase of the analysis vary. In each case, the stated median or third quartile is based on the number of firms reporting this particular activity or function.

General Trends in Budgets

In the average firm, in 1956, the cost (mean) of providing personnel and labor relations staff services amounts to $76.88 per employee. This is an increase of 7.6 per cent over the comparable figure of $71.47 for 1955. These figures describe the mean "per employee" expenditures for directing and administering employee relations programs. They do not include the substantial amounts paid to employees for benefits, nor do they include other expenditures handled through the employee relations division but over which the division has little or no control. As the questionnaire indicates, all such "trust" or "transfer" funds, frequently amounting to much more than the cost of staff services, are reported separately.

The increase in this year's total over that for last year is greater than the similar growth a year ago, but it is less than has been noted in some earlier years. From 1952 to 1953, for example, the increase amounted to 26 per cent; from 1953 to 1954, 13 per cent; and from 1954 to 1955, 3.1 per cent.

The range in total program costs is very broad, from a minimum of $3.36 per employee to a high figure of $450.50. In part, of course, this range is explained by the fact that some reporting firms have very narrow programs, while others include a full range of activities. Some firms, for example, spend nothing on training, while others maintain training programs costing as much as $46.75 per employee. Again, some 22 per cent of all firms report no staff expenditures for collective-bargaining activities, while other firms may be spending as much as $50.00 per employee.

The percentages of firms reporting each of the 13 major functions outlined by the questionnaire have been listed in each of the earlier studies. This picture appears to be much the same as in other years, so that repetition is unnecessary. Perhaps it may be well to note, however, that 20 per cent of respondents indicate no expenditures for training, 32 per cent none for rating, 22 per cent none for labor relations, 4 per cent none for employee benefits and services, 14 per cent none for health and safety, and 8 per cent none for wage and salary administration.

Costs by function. As in earlier years, the most expensive activities are the health and safety programs (with an average per-employee cost of $8.55), administration of employee benefits and services ($6.91), and staffing ($5.94). Increases in costs this year are evident in departmental administration (from $4.84 to $5.88), maintaining records and reporting (from $3.22 to $3.62), and labor relations (from $3.93 to $4.64). Small increases, of doubtful significance in such a sampling procedure, are also reported in training, benefits, and wage and salary administration.

Median expenditures for health and safety show the only significant reduction, falling from $9.66 for 1955 to $8.55 for 1956. Other reductions, too small to be meaningful, are reported for planning, staffing, promotion and

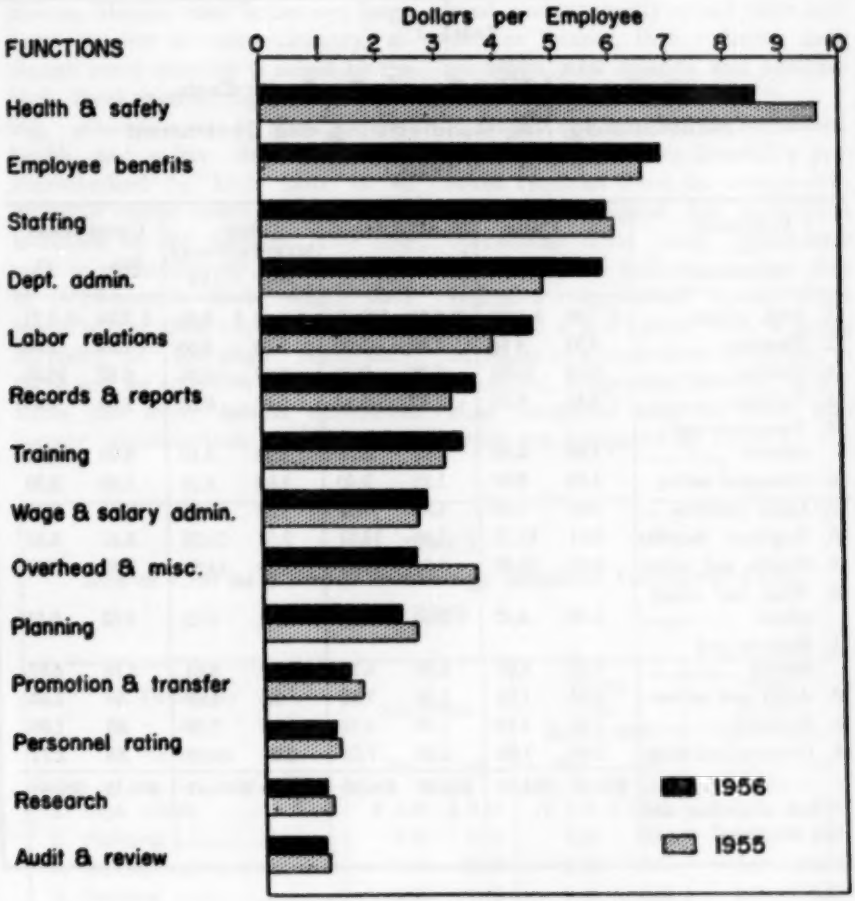

EXHIBIT 2

Average Functional Costs, 1955 and 1956

(Medians)

transfer, personnel rating, auditing, research, and the overhead and miscellaneous category. These comparisons are summarized in Exhibit 2.

Industry differences. Table 1 compares these functional costs for three types of establishments—manufacturing industries, non-manufacturing, and government. In previous years, median costs were reported for eight major industry groups. However, the samples for some of the groups were, and still are, very small, so that the usefulness of these detailed figures is doubtful.

TABLE 1

Median and Third-Quartile Per Capita Costs
Manufacturing, Non-Manufacturing, and Government
1956

Functions or Activities	All Firms		Manufacturing		Non-Manufacturing		Government	
	Md	Q_3	Md	Q_3	Md	Q_3	Md	Q_3
1. Dept. admin.	$ 5.88	$ 9.41	$ 6.18	$10.06	$ 6.62	$ 9.08	$ 2.24	$ 4.21
2. Planning	2.38	4.65	2.40	5.00	2.50	5.00	1.24	2.38
3. Staffing	5.94	10.89	5.22	9.56	9.17	15.25	6.87	10.80
4. Training	3.41	6.25	3.12	5.36	5.17	8.58	1.86	2.63
5. Promotion and transfer	1.48	3.33	1.37	2.73	1.90	3.40	4.00	4.71
6. Personnel rating	1.21	2.67	1.21	2.40	1.62	3.16	1.05	2.38
7. Labor relations	4.64	7.50	4.88	7.75	3.83	6.75	2.31	2.37
8. Employee benefits	6.91	13.71	7.58	14.01	8.67	13.50	3.10	4.35
9. Health and safety	8.55	15.41	9.04	16.61	8.50	14.67	2.35	8.02
10. Wage and salary admin.	2.78	4.47	2.56	4.00	3.58	6.42	2.52	6.41
11. Records and reports	3.62	6.05	3.56	5.79	4.12	6.61	3.16	4.67
12. Audit and review	1.00	1.76	1.28	1.82	.83	1.69	.95	1.40
13. Research	1.01	1.74	1.02	1.74	1.10	2.00	.83	1.05
14. Overhead and misc.	2.60	7.06	3.23	7.52	2.33	10.50	.65	2.11
Total (Sum of median and Q_3 functional costs)	$51.47	$94.90	$52.65	$94.35	$59.94	$106.61	$33.13	$57.49

Major differences are apparent from the table. In terms of total costs, both manufacturing and non-manufacturing are higher than the over-all measure, and government is lower. Median costs in manufacturing firms, because of their prominence in the total sample, are much like the whole. However, manufacturing firms spend more than the general average—both in terms of the medians and the Q_3's—for employee benefits and the general administration of the entire program. Non-manufacturing firms spend less for health and safety and less for labor relations. Government agencies show lower costs for all activities except promotion and transfer.

Size as a factor in costs. Without exception, the largest reporting firms provide each of these major activities at lower per-capita costs. Table 2 compares median and Q_3 costs of the smallest firms—those having less than 500 employees—with the largest—those having more than 10,000 em-

ployees. Median costs in the very large firms are low in every category, although some question is raised by the high third-quartile figures for staffing, promotion and transfer, and health and safety. Small firms are characterized by high costs in all activities except health and safety, as indicated by the medians. This contrast is made sharper by comparison of third-quartile firms, which show much higher than average costs in a majority of functions. Apparently, there are no activities in which small firms can effect special economies. Larger organizations, on the other hand, can apparently spread their staff services thinner, thus reducing both per-capita staff salaries and administrative expenses.

Single- and multi-plant operations. Previous reports have invariably provoked inquiries about the comparative costs of single-plant and multi-plant operations. This year, respondents were asked to indicate whether they represent single-plant firms, single plants in a multi-plant firm, a group of plants in a multi-plant operation, or a central, corporate division. Individual functional costs for these four types are compared in Table 3.

TABLE 2

Size of Firm as a Factor in Average (Median) Functional Costs

1956

Functions or Activities	All Firms		Under 500 Employees		Over 10,000 Employees	
	Md	Q_3	Md	Q_3	Md	Q_3
1. Dept. admin.	$ 5.88	$ 9.41	$ 7.75	$ 15.60	$ 3.43	$ 6.18
2. Planning	2.38	4.65	4.28	8.41	.92	1.37
3. Staffing	5.94	10.89	6.52	15.55	3.49	14.14
4. Training	3.41	6.25	3.61	5.33	2.36	4.27
5. Promotion and transfer	1.48	3.33	1.97	4.23	3.33	4.71
6. Personnel rating	1.21	2.67	2.38	4.00	.34	.86
7. Labor relations	4.64	7.50	6.75	11.62	2.44	6.19
8. Employee benefits	6.91	13.71	8.79	14.09	2.97	6.02
9. Health and safety	8.55	15.41	5.26	11.37	5.73	18.86
10. Wage and salary admin.	2.78	4.47	4.23	9.16	2.54	3.73
11. Records and reports	3.62	6.05	4.78	16.61	1.86	4.18
12. Audit and review	1.00	1.76	1.66	4.00	.61	.86
13. Research	1.01	1.74	1.70	2.88	.40	.79
14. Overhead and misc.	2.60	7.06	2.70	19.37	.69	7.01
Total (Sum of medians and Q_3s)	$51.47	$94.90	$62.38	$142.22	$31.11	$79.17

TABLE 3

Median Per Capita Costs
Single-Plant, Multi-Plant, and Corporate Divisions

Functions or Activities	All Reporting Firms $N = 215$	Single-Plant Firms $N = 100$	Single Plant in Multi-Plant Firms $N = 21$	Several Plants in Multiple-Plant Firms $N = 19$	Corporate (Central) Divisions $N = 50$
1. Dept. admin.	$ 5.88	$ 6.70	$ 4.08	$ 6.51	$ 5.03
2. Planning	2.38	2.47	1.41	3.25	1.75
3. Staffing	5.94	5.77	7.81	9.25	4.38
4. Training	3.41	3.57	3.76	4.72	3.13
5. Promotion and transfer	1.48	1.37	2.62	3.33	1.22
6. Personnel rating	1.21	1.29	1.51	2.81	.80
7. Labor relations	4.64	4.40	4.76	6.52	4.44
8. Employee benefits	6.91	9.50	5.24	8.80	4.67
9. Health and safety	8.55	9.00	4.57	8.91	5.86
10. Wage and salary admin.	2.78	2.78	2.32	4.00	2.65
11. Records and reports	3.62	4.00	4.30	3.60	2.60
12. Audit and review	1.00	1.24	1.43	.95	.61
13. Research	1.01	1.21	1.00	.78	.92
14. Overhead and misc.	2.60	4.42	1.67	7.52	1.82
Total (Sum of functional median costs)	$51.47	$57.72	$46.48	$70.95	$39.88

Several tentative conclusions are suggested by these figures. For one, it appears that the costs of departmental administration are highest in single-plant firms, as are those of employee benefits, health and safety, and research. Member plants in multi-plant organizations appear to spend more than the average on training, record-keeping and reporting, and on auditing. Groups of plants in a multi-plant operation achieve some economies in reporting and record-keeping, auditing, and research. Their costs are higher than the over-all average on all other activities. Central, corporate divisions spend less than the average on each of the major activities.

Such comparisons should be regarded as tentative and of limited usefulness. Individual functional costs are frequently based on small samples.

The problem is complicated by the fact that there may be many patterns of relationships among plants in a multi-plant operation. Similarly, the division of labor between the central office and divisional staff services may be far from uniform, so that composite figures have doubtful meaning.

A few generalizations may be made with respect to total program costs under these varying relationships. The most expensive programs are apparently those of groups of plants in a multiple-plant firm. Single-plant firms and single plants in multi-plant firms spend less. Central offices are the low cost operations, but this figure means less, because it is not clear how much of each service they provide for the individual plants within their organization. Any combination of corporate office costs with those of individual plants within the same organization would indicate that multi-plant operations as a whole are much more costly than other types.

Trust or transfer funds. Thirty-seven per cent of all reporting staff divisions handle funds over which they have little or no control. The median amount of such funds, for all reporting firms, is $109.08 per employee, and they range from 50 cents to $1,098.45. They are most common in trade (55 per cent of reporting firms). In manufacturing, they are reported by 38.5 per cent, in public utilities, by 36 per cent, in transportation, by 30 per cent, in finance, by 27 per cent, and in government, by 17 per cent of companies.

As would be expected, the largest amounts are those held in trust for employee benefits, averaging $82.00 per employee. Funds for this purpose range from six cents to $1,056.73 per employee. No other activity involves such a large amount, although these trust funds are also related to health and safety, training, labor relations, and the overhead and miscellaneous categories.

Relationship to dollar sales. For several years, questions have been raised about the relationship of "personnel" budgets to the dollar volume of sales. It is said that many firms fix their total employee-relations budgets as a percentage of sales. No common yardstick based on this relationship appears logical, for different industries vary in the proportion of their labor costs to total costs. However, for the first time this year, respondents were asked to indicate their total sales so that the relationship could be calculated.

Total costs of providing employee relations staff services average three-tenths of 1 per cent of the dollar volume of sales. The effective range of this proportion is from 0.1 to 1 per cent, with a few scattered returns above this range. Manufacturing, transportation, and public utilities have the same median, 0.4 per cent. These are rather "high" labor cost industries. In trade, the median is 0.15 per cent, and in banking, finance, and insurance, 0.1 per cent.

Personnel Ratios

The median personnel ratio has been calculated for all reporting firms, in part as a means of comparing this sample with the much larger sample represented in the Industrial Relations Center's annual survey of salaries and ratios. It is 0.76—precisely the same as the ratio reported in the more

comprehensive January survey. This means that employee relations staff members are provided in the ratio of 76/100 of one staff member per 100 employees, or one staff member for each 131 employees in the "average" firm. Ratios for each industry group also correspond closely to those reported in the larger sample covered in the January study.

Functional ratios. From these reports, functional ratios have been calculated. These show the amount of staff time allocated to each major staff function or activity. They are calculated as the number of staff members assigned to each activity per 100 employees. For example, the median functional ratio for labor relations is 0.06, which means that 6/100 of one staff member is assigned to this function for each 100 employees served by the staff. To put it another way, this means 6/10 of one full-time employee per 1,000 employees, or six staff members per 10,000, or one staff member per 1,667 employees.

Functional ratios facilitate more realistic yardsticks than is possible with the gross personnel ratio. They enable the reader to calculate a personnel ratio for a program that includes only the activities in which his staff is engaged. For example, if the company does not engage in collective bargaining and the program includes all activities except labor relations, a yardstick of about 0.70, rather than the over-all median of 0.76, can be used. If comparison with the Q_3 over-all measure of 1.20 is preferred, the Q_3 labor relations ratio of 0.08 should be subtracted. It will be noted that the sum of the functional ratios is not exactly the same as the over-all ratio, because each functional ratio is a median for the total of firms reporting that activity. However, these measures should never be regarded as precise; the size of the samples does not justify calculation to the third decimal point.

Exhibit 3 shows the structure of these functional ratios, indicating both the medians and third quartiles. As will be seen, major staff time is allocated to health and safety programs, employee benefits and services, staffing, and record-keeping and reporting. These are the four most time-consuming activities. This year's pattern is consistent with that reported in earlier years, but ratios for labor relations and for record-keeping and reporting are somewhat higher than last year, while those for general administration, employee benefits and services, health and safety, and miscellaneous assignments are slightly lower.

Multi-plant ratios. Functional personnel ratios follow essentially the same general pattern in single-plant firms, in individual plants within a multi-plant organization, and in several plants within such an organization. However, if functional ratios for each type of operations are totaled, differences can be noted. Such a "mythical" total ratio for all firms in the sample is 0.73. For single-plant firms, the similar ratio is 0.79. For single firms in a multi-plant operation, the ratio is 0.68; for several plants in a multi-plant operation, 0.84; and for corporate offices, 0.51.

Individual functional ratios in single-plant firms are much like the pattern of all reporting firms, except that ratios for employee benefits and for health and safety programs are some-

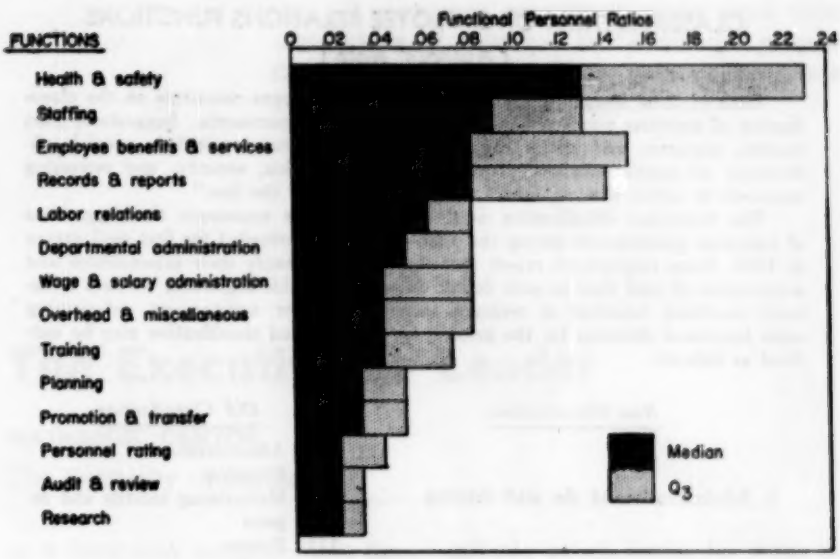

EXHIBIT 3

Functional Personnel Ratios, Medians and Third Quartiles, 1956

what higher for the single-plant firms. Groups of plants within a multi-plant organization report higher ratios for planning, training, benefits, and health and safety, and lower ratios for rating, auditing, and overhead. The functional ratios shown by the 50 corporate offices are lower for every activity.

Industry differences. Separate industry-group functional ratios are not reported here, because the individual industry samples are not large enough to warrant such a refinement. Comparison of functional ratios for manufacturing and non-manufacturing firms indicates no sharp distinctions. The principal differences among industries take the form of different combinations of functions rather than variations in the assignments of staff time to such functions as are performed.

Ratios by size of firm. All the functional ratios show the influence of firm size, i.e., the number of employees. The economies in costs in the large firms which have already been noted are paralleled by economies in the assignment of staff time. In the smallest firms—those with less than 500 employees—all median functional ratios are higher excepting that for health and safety, for which the small plants report a ratio of 0.10 compared with the general average of 0.13. For the sample of large firms, on the other hand, all median functional ratios are smaller than those for the entire sample.

CLASSIFICATION OF EMPLOYEE RELATIONS FUNCTIONS

(*Authors' Note*)

Each of these budget studies has occasioned numerous comments on the classification of activities performed by employee relations departments. Suggestions from readers, inquirers, and critics range from proposals that we include special subdivisions on public relations, plant protection, sanitation, security, and recruiting engineers to advice that we ignore criticisms and "hold the line."

The functional classification used in these surveys represents the suggestions of numerous practitioners during the pilot studies that preceded the first mail survey in 1952. Some respondents report that they cannot classify their expenditures and assignments of staff time in such detail. Impressed by this argument, we have tentatively combined functions to create a somewhat simpler arrangement, substituting eight functional divisions for the present 14. This revised classification may be outlined as follows:

New Classification	*Old Classification*
I. Administration of the staff division	1. Administration 2. Planning 11. Maintaining records and reports 12. Review
II. Staffing	3. Staffing 5. Promotion, transfer, termination 6. Personnel rating
III. Training	4. Training
IV. Labor relations	7. Labor relations
V. Wage and salary administration	10. Wage and salary administration
VI. Employee benefits and services	8. Employee benefits and services 9. Health and safety
VII. Research	13. Research
VIII. Overhead and miscellaneous	14. Overhead and miscellaneous

The data of earlier studies can be readily translated into this form, so that time-to-time comparisons would be possible. Comments from readers on this possible modification in future questionnaires, studies, and reports will be welcomed.

. . . If managers sometimes make more than their share of mistakes in "handling" people, the fault may lie in the deeper personal problems inherent in the management job itself.

The Executive as Leader

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IT IS GENERALLY recognized that there are two major areas of executive responsibility the management of operations, and the management of people. The management of operations requires a specialized technical know-how. The management of people calls for a different set of specifications altogether.

Managing, in this latter sense, entails the exercise of power over people. Ideally, the executive uses his power over others in such a way as to *help them* carry out the policies of the organization in the most effective manner. He is not out to "show who's boss" or to win every argument with his subordinates or associates. In communicating company goals, policies, and needs, he seeks to develop an *esprit de corps* and to help others release their creative potential. He recognizes that, if optimum performance is the goal, each member of his group has a contribution to make, and that his role is to encourage a give-and-take at all levels. In short, the ideal manager functions not as a "boss" in the authoritarian sense, but as a leader.

"What can I do to help?" sums up his attitude toward subordinates. "Are there any resources I control which you might need to do a better job? Are there any problems you face which we ought to share?" Or again: "How do you feel about this decision? You may not be quite comfortable about it. Perhaps we should talk it over."

How well do executives meet these specifications? Why is it that so many managers, skilled at handling things, are so inept at "handling" people? Why do they tend to dominate their subordinates instead of helping them?

It is the purpose of this article to inquire into the reasons why executives so often fail as leaders. After considerable observation of management behavior and leadership patterns, in Western Europe as well as in the

United States, and a long experience in conducting management workshops, I have formed the impression that executives, by and large, are *unaware* of certain underlying processes which affect their personal relationships with people. A dispassionate examination of these processes should help executives achieve a better understanding of their leadership role and improve their relations with others.

The Root Problem

It is of course a truism that executives once were children. As everyone knows, habits acquired in childhood find expression in adult conduct and each of us lives under limitations imposed by his childhood experiences. In the case of the executive, these circumstances may combine with the prestige and power of office in an unholy alliance against him.

To begin with, many of the undesirable ways of "handling" people which adults display stem from the child's experience of being "handled" by his parents.

A developing infant faces a long and difficult struggle in finding his *own* roots. Normally, he is cuddled by the significant people in his life and this enveloping affection affords a sense of "belonging." Once the child begins to attend more carefully to the spoken word, greater demands are made upon him. He is now expected to conform to the adult world in which he finds himself. The parents surround him with verbal magic and seek to control him in directions which he may find uncomfortable and frustrating.

By and large, the child submits to this treatment because he needs the good will and affection of the significant adults in his life; but submission is accompanied by inner (and sometimes outer) feelings of hostility, resentment, and, especially, anxiety. In other words, one of the chief weapons in childhood "education" is fear—the child's fear of disapproval or withdrawal of affection. In using such a weapon, parents achieve authority, but it is an authority *felt by the child as arbitrary.*

In fairness it must be pointed out that the parent's role—at best no easy one—is rendered still more difficult by the average adult's need for a bulwark against the ever-increasing complexity of modern life. All of us seek reassurance that we amount to something and children represent a natural target for our drives. Yet, with all due allowance for the pressures that impel parents to behave as they do, the fact remains that the situation creates a basic conflict in the child. He wants to be like others, to depend upon others, and to do what others would like him to do. Call this imitation, or in modern language, identification. At times, however, he wants to express his peculiar differences—to assert his independence. Yet, from his earliest days, the child learns that being independent carries risks. There is an outer world of objects and people which blocks him. But the greatest block is his own inner world: fear of the consequences of expressing himself —his conscience, super-ego, fear of the boss. If he is too independent, he becomes scared of losing the support of those upon whom he depends. If he is too dependent, he is filled with resentment and hostility, frustrated at the failure to express himself.

In the child's early years, the balance is heavily weighted on the side of dependence. The later years of preadolescence, adolescence, and postadolescence, as he begins to assert his independence, are filled with anxiety-producing experiences. A great deal of this is inevitable. As the late Dr. Harry Stack Sullivan often remarked, "The worst way to bring up children is to provoke anxiety in them. The second worst way is not to produce anxiety."

The result of such conditioning is that each of us becomes ambivalent, split in our feeling, thinking, and doing. We carry into adult life a considerable load of inferiority feeling. We are basically insecure, spending a great deal of effort in seeking reassurance, trying to convince ourselves and others that we amount to something, that we are *somebody*. We seek outside of ourselves a security which can be found only within ourselves, but which we lack.

> Most of us are often out of balance with our environments and with ourselves. We refuse to recognize and accept this fact. We deny it. Without being aware of what takes place, we either conceal, distort, or create attitudes, and engage in the appropriate behavior which justifies our action. We have too much at stake. The pretty pictures we have built up about ourselves must not be spoiled. We incorporate into our own personalities the demands or wishes of others, whose approval we seek. If we do this often enough, the demands of others become identified with our "own" desires.
>
> This process, however, is accompanied by resentment at the failure to express our difference and the necessity to conform with what others insist we shall become. We want to be like those around us, so that we may be liked by them, but we want to express our differences so that we might have the feeling of being somebody. If we dare to express our difference, we must be ready to face the disapproval of others. This makes us feel guilty. We become uneasy and afraid of such disapproval. We seek to re-establish ourselves in the good favor of those who disapprove of our conduct. On the other hand, if we succumb to the wishes of others in order to be like them and to win their approval, we feel resentful and hostile at having to suppress our differences.
>
> Were we aware of this polar conflict, we would not be as twisted as many of us are in our thinking and feeling. We are often afraid to be ourselves. We deny that we do a lot of faking. We pretend that, on the whole, we are consistent, rational, upright, kindly creatures. We conceal from ourselves that we are also, at times, inconsistent, irrational, unrighteous, cruel, hostile, and hateful.
>
> The trouble does not lie in being hostile, cruel, or irrational. That is an inevitable part of our make-up. We *are* that way, at times. *The trouble arises in our denying that we are that way.* It is the self-deception which does not permit us to recognize our conflicting selves. We engage in behavior which, unknown to us, compensates for our inadequacies and shields us from our faults.[1]

Uses and Misuses of Authority

Do these concepts have any practical applications for the executive?

Let me cite an instance from a workshop which I conducted recently. In the course of discussing the "use of authority," one of the participants, a supervisor named Bill, complained about the lack of respect for authority and related an experience with one of his subordinates, Pete, to demonstrate the point:

> So I called out to him, "Pete, that grease around your machine is a safety hazard. One of these days someone is going to slip and break his neck. This is the last time I'm warning you. Next time you're going to get into real trouble." What do you suppose the guy said to me? Right in front of the whole gang he yells back, "Look, mister.

[1] N. Cantor, *Dynamics of Learning*, 3rd Edition, Foster & Stewart, Buffalo, N. Y., 1956.

> I've had a belly full of your lip. You can go straight to hell." Well, no employee can talk to me like that. I had to protect my authority in front of all those people. Now, was there anything wrong with what I said?

Another participant asked Bill what happened next.

> What happened? I fired the guy. That's what happened. No one can talk to me like that.

After quietly suggesting to Bill that the employee *did* talk to him like that, the leader asked the group how the authority of the supervisor had been protected by firing the employee. Bill jumped in again at once:

> I had to show everyone who heard this who was boss.

Dick, another member of the group, remarked that Bill would have done better to ask Pete to step into his office. The leader suggested that we role-play the situation. Bill volunteered to assume the role of Pete, and Dick acted as supervisor. After they had carried on the discussion for about fifteen minutes, the group then analyzed what took place. Everyone, including Bill, agreed that Bill had not protected his authority but had displayed a lack of authority *over himself*. He lost control of himself because his own *security* was threatened. Bill felt he had to be *boss*. He needed to control others in order to reassure himself and quiet his own feeling of inadequacy. Because Pete's attack increased his anxiety, Bill used him as a target for his personal tensions. The members agreed that management expected Bill to help employees improve, not to make them whipping boys for his own inadequacies.

Let me generalize on this point. Bill is much more likely to win the respect of Pete if he shows him that he understands his feelings. Indeed, it is unlikely that any supervisor who had demonstrated such understanding would be exposed to this kind of outburst from an employee in the first place. The skilled manager does not argue about feelings—he accepts them. Instead of argument, he offers help in defining the problems, limits, or responsibilities of the job so that the employee himself may come to feel differently and, hence, react differently. The control in such situations is not defined by the personal need of the manager to prove to himself that he can win. It is defined by the function delegated to him. In a word, the manager does not exercise control over the employee as a person, he controls *himself* in the exercise of the functions assigned to him. His responsibility is to help the employee help himself.

When one is emotionally involved with others, of course, it becomes difficult to distinguish the willingness to help from the need to control. If we observe our own behavior closely, we shall notice how frequently we engage in psychological exploitation of others, using them to gratify our needs, to win love, or to achieve control. Rarely do we accept people *on their terms* and simply *like* them without trying to control them.

In a professional relationship, however, the problem, once it is recognized, should be less difficult to handle. Ordinarily, managers are not deeply involved emotionally with their peers and subordinates. The business relationship, while friendly, is primarily professional rather than familial. Nevertheless, emotional elements intrude upon the professional relation-

ship as well. Managers are only human, after all. Having been conditioned in hit-or-miss fashion, like the rest of us, they too may experience deep disquietude about themselves and use their power and position to assuage it.[2]

By way of example, let us suppose a personnel manager is describing to the Vice President in charge of Personnel a new plan for getting supervisors to participate in policy making. The Vice President, waving his glasses, peremptorily dismisses the suggestion as impractical. It may be all right to hear what the supervisors have to say about it—that might even be a good way to "sell" them on what has been decided; but, after all, it is the Vice President who makes the decisions. In reply, the personnel manager reminds his superior that it is company policy to seek the active and creative participation of the supervisors; he reminds him of the "open door" philosophy—the plea for "communication up the line"—proclaimed in the last issue of the company magazine.

"We'll do it my way," is the icy rejoinder. The manager replies, "I'm afraid, as a matter of integrity, I simply can't go along with that." "Well, under the circumstances, perhaps you had better resign," says the Vice President. "Yes," answers our manager, "that is one alternative. The other—since I'm convinced that the company will benefit from my plan—is that you offer your resignation."

How many personnel managers would have the courage to express themselves with such frankness? And how many vice presidents would have the insight, and feel secure enough, to encourage such an exchange? Yet, without this kind of insight and encouragement, genuine communication cannot take place.

Face Saving and Double Talk

Inevitably, of course, the status system nurtures certain built-in defects. Face saving is one. Superiors are expected to be "superior"—to be shown up by a subordinate is a serious loss of face. The superior must protect his own idealized image of himself, as well as the image which his peer group holds of him and which he too accepts. No wonder, then, that the prestige of office becomes a face-saving device, a defense against disguised uncertainties and disquietudes.

Let us consider the problem of communication further. Again, we must go back a bit. How do parents communicate with their children? They *talk* endlessly to them, trying to teach them by words, what is good or bad for them. If children *seem* to pay attention, at least sometimes, it is an illusion. They *do* pay attention—but not to what parents think they do! They pay attention to the threat behind the words. If they yield, it is less because they understand adult logic and rationalization than because they rehearse (quickly and subtly) the penalties for not conforming. The child builds up a system of security operations. He learns to say and do whatever will keep him out of trouble. This kind of learning is negative learning. It teaches us how to avoid

[2] I am mindful of the danger of overgeneralization, here and elsewhere throughout this paper. Certainly, there are all kinds of managers and many sensitive, cooperative executives who honestly try to help their subordinates. In my own limited experience, however, I have found more understanding in lower management. I hope I shall not be considered cynical if I remark that, having less power, they do not push people around so much.

tangling with authority, how to deny our differences, how to cover up anxiety, and *how to use words which will not communicate what we really feel.* Is it any wonder that adults are so adept in talking their way in or out of anything? We've had years of experience in hiding our feelings behind a screen of words.

The same pattern is evident in managerial training and communications. Like parents, management relies in general upon the device of telling others what should be done. But *telling* others practically guarantees that they will not learn. All of us have acquired skill in "selective inattention." We listen to what we wish to hear; we ignore or pervert what we find uncomfortable; and we read into things what we would like to find, not what is there. If management relies upon words to teach, subordinates will "pay their respects" to their superiors in *double talk*—but they will not learn. The learner must create something for himself. Management skills flow from men, not manuals.

The Executive as Teacher

Much of what has been said so far has a bearing on the executive's function as a teacher. How can he perform this function most effectively? Let me suggest certain propositions about the teaching-learning process which may serve as a guide.

1. *There is an essential difference between knowledge and understanding.* The task is not merely one of transmitting facts to the learner but of giving the learner the chance to translate facts into understanding. *Possessing* knowledge is largely a matter of memory. *Being possessed by* knowledge transforms the whole person. Genuine learning makes a difference in the behavior of the learner—it is the remaking of experience. As Emerson said, "Only so much do I know as I have lived."

To illustrate this point, let me cite another experience in a workshop which I conducted. We were talking about the importance of starting where the *learner* is, in trying to help him develop or change. A member of the group, A.B., who is in charge of management development for a nationally known organization, remarked quietly:

> Of course, you can't build any kind of program unless you know what the problems of the group members are.

No one commented after his remark. There was a period of silence lasting about 20 seconds. Suddenly A.B. looked up, rather startled, and raising both hands to his head, almost shouted:

> My God, it suddenly dawns on me that for 15 years I've been sitting behind my desk writing programs for people I've never seen. How did I know what their problems were? Why, that's terrible! And I'm supposed to be the expert in management development!

A.B.'s first statement was a perfunctory repetition of an abstract idea—he was merely adding to his knowledge. Quite different was the explosive release which followed, indicating a sudden awareness of the unsound approach he had been using. With his second remark, the idea we were talking about had seeped in and taken hold. He gained insight, remade his experience. Integrating the new idea with past performance, he arrived at a *qualitatively different* approach to training.

2. *Significant learning is a function of confusion.* It is only when one does

not know the answers that learning starts. Is it not obvious that a learner will not seek an answer unless he has a problem? Of course, he may be confused, annoyed, and irritated, and still not learn. But learning must be accompanied by disturbance of some kind. The greater the disturbance, or even pain, the greater the likelihood that significant learning will occur.

3. *Resistance to change may block the learning process.* From the proposition that learning is a function of confusion, it becomes clear why people resist it. Which of us welcomes confusion and change? Certainly it is much less wearisome to deny discomfort and uncertainty than to have to change ourselves. To recognize responsibilities which have not been met, decisions which have been avoided, and errors which have been committed, is to accept feelings of guilt, shame, and disesteem. We seek to avoid such discomfort and save face with ourselves by distorting the actual situation. But the discomfort is only temporarily removed, and in one way or another it will affect subsequent behavior.

The mechanisms we have built to defend our psychic organization against change are legion: rationalization; lying; projection; compulsive drinking, eating, sleeping, card playing, talking—these are but a few. (Of these, "talking" merits special emphasis because, as I have already pointed out, it is the clue to many of the problems of communication in industry and business.)

Which of us has not had the panicky experience of suddenly being asked to see his superior? If we feel especially guilty or insecure about our recent job performance, our anxiety mounts and we enter the office with muscles tightening, swallowing hard, trying desperately to appear calm and unconcerned. No sooner does our superior question a decision we have made then we start defending or justifying our action.

Or, let us say, we are in casual conversation with a superior. He tells us about a decision he has made and asks us what we think of it. If we do not agree with him, we may hem and haw, or talk about and around the issue, but we end up saying, in effect, "Yes, of course I agree." We do not feel free to speak our piece and expose a fundamental disagreement—the risks are formidable and we are unwilling to face them.

4. *All learning occurs in an emotional context.* This follows, obviously enough, from what has just been said, but it is a fact that is not readily appreciated. If an executive vice president is discussing a financial problem, or an instructor is leading a discussion on a problem of distribution, one may wonder what the emotional context is. It is there, in the "hidden agenda" with which the participants are primarily concerned. These private agenda screen everything we hear or say. Each participant, often unaware of what he is doing, makes a rapid survey of the situation: How will his comments be received? Will they meet with approval or disapproval? Will he endanger his reputation for being a smart fellow? Better watch out—the mortgage payment is about due!

A simple test of the emotional context of learning consists in listening carefully to the pitch of voice of the

participants. Do they speak easily and quietly? Can one sense genuine curiosity when a question is put? Are the speakers primarily concerned with *ideas*? Or doesn't it happen, more often than not, that one detects in the voices a defensive, argumentative, aggressive, timid, or domineering note?

5. *All significant learning is personal.* Since no one can transfer his experience to another, no one can *really* teach another. It is difficult enough to learn from one's own experience, let alone attempt to teach it to others. Other people can no more assimilate *our* insights, feelings, views, or knowledge than they can digest the food we eat. Learning, and the motivation to learn, must be personal. The best the teacher can do is to provide a favorable setting. Whether or not learning takes place depends upon the learner. The starting point for effective teaching, therefore, must be where the learner is, not where the teacher thinks he is or would like him to be.

6. *A good teacher refrains from using the learner for his own emotional needs.* This caveat applies with special force to the executive. It is difficult enough, certainly, for anyone to avoid the temptation to exploit others as a means of discharging his own anxieties and tensions. Beset by inadequacies, frustrations, and hostilities which have accumulated over the years, and not recognizing the forms in which these are expressed, we are all inclined to "take it out" on others. None of us is quite the fine, consistent, upright creature he believes himself to be, but each of us spends a great deal of time and effort in pretending that he is. We build involved systems of defenses to protect the idealized image of ourselves, trying to drug, distort, or deny basic conflicts in our inner life. Some seek peace of mind with a book or a bottle, others reassure themselves by bending people to their will.

The executive is peculiarly exposed to such temptations. He has the habit of power, and he finds in his subordinates ready-made targets for its exercise. Moreover, he may owe his success to attributes which have nothing at all to do with the ability to deal with people—a capacity for hard work, let us say, or technical know-how in specialized areas. Thus, even his virtues may count against him.

The executive who gains insight into his need to dominate and realizes the defensive role it plays in his life, is likely to experience, at least initially, some guilt and humiliation. But this insight will open the way to greater freedom in his relationships with his subordinates.

7. *A good teacher challenges the learner.* To challenge is not to win a victory over the learner, nor to try to control him, but rather to help him on his own terms. The teacher stands by and permits the learner to do what he wants with the challenge, even to reject it. The timing of the challenge, and its tone, depend upon the relationships built up previously between subordinate and superior.

The executive who gains insight into this process also challenges himself. By struggling to understand his own need to dominate, to control, to be right, to be approved of, he achieves strength and inner security. He comes to view himself as a "resource" for his subordinates, letting them *use him;* learning to be less uncomfortable, even

when his help is rejected, and encouraging questions, suggestions, or even differences of opinion.

Most important, perhaps, is the ability of the executive to accept disagreement. To free the subordinate to the point where he dares to be more of his real self and expresses, easily and freely, his differences with authority, is to produce the kind of atmosphere which releases creativity. There is no fear of disapproval, no threat to self-esteem, no ugly competitiveness, no badgering, sarcasm, or "wisecracking," but a deeply felt sense of mutual respect and a common seeking for growth and development.

An executive cannot help creating such an atmosphere if he himself possesses *genuine self-respect.* This quality inevitably communicates itself to others. Self-respect, in this context, grows out of a recognition of the mixed character of human nature and an understanding of the difficulty and confusion which accompanies learning, the resistance to change, and the defensive mechanisms of the self.

Genuine self-respect implies also a readiness to admit mistakes. How many executives can do so? A case in point is that of the national sales manager who was conferring with the divisional sales manager in an effort to discover why sales had dropped in his division:

> What in hell is wrong with your office? Don't your people know their job? Last week Company X canceled their order because delivery wasn't made on time. Company Y never got our bid. What's wrong with this outfit, anyway? No one is indispensable, you know.

The national sales manager did not know, however, that the divisional sales manager had assumed his new duties only two days before and had not had time to acquaint himself with the current orders. He was unaware, also, that a clerk in the receiving department of Company X had made an error and had failed to report the receipt of the order, and that, as it happened, Company Y had gone into bankruptcy.

When the facts were made known to him, the national sales manager retorted, "Why don't people tell me these things?" A self-respecting manager, of course, would not have permitted himself the luxury of bawling out the district manager in the first place. If he had so indulged himself, he would have felt humiliated upon discovering the facts and would have apologized immediately. The self-respecting executive can admit mistakes, and in doing so, he wins the respect and confidence of his subordinates.

The foregoing comments are intended to reveal the horizon, not to detail the topography. I have tried merely to indicate my conviction that one of the chief responsibilities of an executive is to help others to develop, and that an understanding of the teaching-learning process, combined with self-understanding, can make the executive a more effective leader.

Such understanding can lead to a partial resolution of the age-old problem, that of tempering power with service to others.

. . . Personnel staffs may be inclined to balk at this interpretation of their role—but, consistently followed, it should help to remove some long-standing conflicts with the line.

Personnel Staff and the Line Organization

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WHAT IS THE proper role of the staff personnel department in relation to the line organization? What authority does the personnel manager have? What decisions can he make? From chief executive's office to production floor, questions such as these are at the nub of many a dispute over accountability, prerogatives, and plain "who gives orders to whom?"

When the personnel manager is asked to give his side of the story, he usually sees his job as that of determining personnel policies and plans and preparing programs to be carried out in the line departments. Also, he believes he has an obligation to inspect line operations to make sure that a good personnel job is being done. The line reaction to this point of view may range from skepticism to derision.

Consider policy making as a case in point. In one company, the president delegated to the personnel manager responsibility[1] and authority[2] to "decide and enforce personnel policies and programs." The personnel manager took this as his charter. In the wage and salary area, for instance, he developed and published company-wide salary ranges for newly hired college graduates. Typical of the reaction was a vehement protest from the production vice president. "The market for engineers is so tight we can't get half the qualified managers we need," he said. "Now our personnel people have put a ceiling of $375 on college graduates and they're sitting on it. I have a program for product expansion, but I won't be held to account if personnel won't let me hire engineers at whatever rates we have to pay to get them."

[1] Responsibility is the *work* assigned to a position. The term as used refers to the work itself. Work is physical or mental effort.

[2] Authority is the sum of the powers and rights necessary to carry out responsibility.

Look at another aspect of the problem—accountability[3] for personnel programs. If the management development program fails to develop managers, should this failure be laid at the door of the personnel function? The question has many implications, most of them troublesome. According to a commonly accepted principle of organization, the personnel manager *cannot* be held accountable for developing managers unless he has the requisite authority. But rare indeed is the suggestion that personnel should be given authority over line managers, even to aid management development.

The predicament of the personnel man is pointed up by one training manager who recently instituted a new training program. He was perturbed because attendance at training classes was poor. "I've designed these courses to develop management skills," he said, "and our managers need development. Plenty of it. But I rarely get as high as 40 per cent attendance. If the company is laying out money for training, I feel I should have some control over attendance."

Identifying Line and Staff

Examples such as these are commonplace. Their net toll to the company is loss of efficiency, unnecessary expense, and jeopardy to effective teamwork. While the solution to the problem will vary in detail from company to company, there are certain fundamentals which apply to all situations. Basic is an understanding of how staff differs from line and the proper role of each in the company. Let us examine the line organization first. What is line? How can it be identified?

The line organization comprises the elements that are accountable for accomplishing the company's basic objectives. To identify line, you must know for what purpose the company is organized.[4] A rubber company, for example, is organized to manufacture and sell rubber products. Hence, its line departments are manufacturing and marketing. In a chemical company, where research to replace obsolete products is as essential to maintaining competitive standing as the manufacture and sale of the existing product line, the line organization consists of the research, production, and sales departments. An oil company is organized to explore and develop sources of petroleum and petroleum products and to refine, transport, and market them. Here, the line functions are production, manufacturing, transportation, and marketing. By contrast, an insurance company is organized to insure against predetermined risks on a favorable basis, to sell insurance, and to pay the losses incurred by policyholders. The line functions in this case are underwriting, sales, and claims.

What do we mean by staff? Staff comprises those elements of the organization that are responsible for providing advice and service. Staff departments exist primarily to help the line accomplish the objectives of the company. Thus, personnel is characteristically a staff function. We can define the role of the personnel staff as that of providing advice and serv-

[3] Accountability is the obligation to carry out responsibility and exercise authority in terms of existing performance standards.

[4] Louis A. Allen, *Improving Staff and Line Relationships*, National Industrial Conference Board, Studies in Personnel Policy No. 153, 1956.

ice to the line organization and to other staff elements in making most effective use of the human resources within the company.

Personnel Objectives and Policies

The personnel department provides advice and service to all levels of the organization. At the top management level, it assists the chief executive in developing objectives and policies for personnel administration. Personnel *objectives* are the over-all goals of the company with regard to its people, such as, for example, "To train and develop the company's personnel for improved performance and greater responsibilities within the company." Personnel *policies* are the continuing, relatively permanent decisions needed to implement personnel objectives. Thus, a policy aimed at achieving the goal just stated might be, "Every manager will evaluate the performance of each of his subordinates at least once each year and counsel with him to help identify weaknesses and work toward improvement."

The chief executive of the company and the Board of Directors have responsibility and authority for determining objectives and policies for all aspects of the business, including personnel administration. They decide whether the company will pay equal wages for equal work, whether it will promote on the basis of seniority or performance, or both, whether it will require employees to join a union as a condition of employment, and so on. In most cases, however, neither the chief executive nor the Board has the time or the specialized training to go into these matters in detail. Accordingly, responsibility for studying the company's requirements, reviewing what has been done by other companies, and consulting with line and staff managers to secure their suggestions and ideas as a basis for recommending personnel objectives and policies to the chief executive is delegated to the personnel department. The chief executive reviews the recommendations of his personnel staff, integrates them with the sometimes conflicting demands and suggestions of other functional heads, assesses the whole in terms of the long-range objectives of the company, and either arrives at a decision himself or makes appropriate recommendation to the Board of Directors.

Once personnel objectives and policies have been determined by top line management, the personnel staff provides advice and service in interpreting them to lower levels of the organization. In this capacity, the personnel staff frequently *does things* for the line because the appropriate line manager does not have the special skill, or the time, to do it for himself.

For example, the personnel staff develops over-all personnel programs, such as wage and salary administration and management development, *for* the chief executive. After the chief executive has decided to put these programs into effect, he delegates responsibility and authority for compensating and training people to the accountable line and staff managers concerned. It is the function of personnel to provide the line organization and other staff departments with the advice and service they need to do this job; but the personnel staff itself should not be held accountable for compensating or training employees.

It follows that personnel may set and police salary ranges; it may test and interview job applicants; it may conduct contract negotiations; and it may set up training conferences and classes. In each case, however, personnel does these things because the line and other staff departments call upon it to help them carry out the chief executive's decision with respect to personnel objectives, policies, and company programs.

There is a danger here that the line will try to persuade personnel to take over work that it does not want, or finds it difficult, to do. For example, line managers frequently ask the personnel department to take over the job of appraisal and counseling. The personnel manager may welcome this opportunity because it enables him to provide an important service to the line. However, each such assumption weakens both the personnel staff department and the line organization.

Whenever possible, a program developed by the staff personnel group should be directed toward its own liquidation. Except for purely technical personnel procedures, such activities as training, compensation, labor relations, and communications should be turned over to the accountable line positions as expeditiously as possible. This helps keep personnel staff to a minimum and broadens and develops line managers. The personnel manager should not become enmeshed in the routine of repetitive operation, but should free himself to work with line managers in developing on-the-spot solutions to human relations problems and to originate and develop new activities designed to achieve more profitable operation of the company as a whole.

Personnel Controls

The personnel department also provides advice and service in the development and application of personnel controls. Control, as here used, means the evaluation of work. To be effective, it involves four steps: (1) The development of standards of performance; (2) measurement of work; (3) analysis and comparison of work completed with the standards that have been established; and (4) corrective action to bring undesirable variations into line. The personnel department assists in the development of *performance standards* for personnel activities by helping to establish objectives, policies, programs, procedures, and budgets, which are in themselves yardsticks for performance. The actual *measurement*, or determination and recording of the degree of performance, is best carried out by the position or unit doing the work. Thus, the number of grievances and their handling, extent of tardiness and absenteeism, or effectiveness of job performance in comparison with position responsibilities should be determined by accountable line and staff heads.

Departmental *analysis and comparison* of control information is necessary to the effective self-control of the operating department involved. But provision should also be made for analysis and comparison on a company-wide basis by the personnel staff to insure an objective survey of all the facts and a balanced analysis of underlying or contributing causes. Where *corrective action* is indicated, however, this is invariably a line re-

sponsibility. The personnel director may suggest or recommend it; but if he *directs* that changes be made when he detects discrepancies or omissions, he is assuming the authority of his line superior and is inviting trouble.

Many personnel directors will complain that this concept, by limiting them to the function of "advice and service," belittles the part of staff and gives it an inferior role. This is no more true, however, than to say that the work of the anesthetist or pathologist is less important than that of the surgeon, or that the position of tackle or guard is inferior to that of quarterback. Each has an equally important, if different, part to play. Effective teamwork can exist only if each knows his proper role, is convinced of its importance, and is willing to play it to the hilt without overstepping the prerogatives of the rest of the team.

Basics of a Sound Relationship

It should be clear by now that the line departments, and not the personnel staff, are accountable for making the most effective use of the human resources of their own units. Each department head is responsible for selecting, training, placing, transferring, promoting, compensating, and terminating his subordinates in accordance with corporation policy. Each operating executive, manager, and supervisor who directs the work of others should be accountable for the wholehearted and effective execution of the principles of personnel administration and employee relations set forth by the company. It is the job of personnel to aid in carrying out these principles.

What are the essential components of a sound and workable relationship between the personnel department and the line organization? Of paramount importance are the delegation of carefully defined responsibility and authority to both line and personnel staff and a mutual understanding of the limits within which each may operate.

Both line and personnel staff are delegated authority to carry out their responsibilities. Both make decisions. However, the authority they exercise and the decisions they make differ as to kind and degree. As has been seen, line managers are accountable for the success of the primary activities of the company; hence, they must be delegated authority for final decisions in operating matters. To the extent that this authority is withheld, line managers cannot be made fully accountable. Personnel staff is held accountable for the effectiveness of the advice and service it provides to the appropriate elements of the line organization and to other staff departments. Convincing line managers of the need for and the practicability of his advice and service are part of the personnel manager's accountability.

Who is responsible for establishing the proper roles of line and personnel staff? In the great majority of cases, the relationship is worked out fortuitously, or through a process of strategic attack and retreat. However, if there is to be a sound relationship, responsibility for clarifying the part each is to play must be assumed by the coordinating executive with jurisdiction over both line and staff positions. On the company level, for instance, division and personnel managers report to the chief executive; in the plant, the personnel manager

and the production superintendent report to the plant manager. It is the responsibility of the coordinating executive to insure that both line and personnel staff are delegated enough authority to perform the work assigned to them, and no more. He must see to it that there is no overlap, and that both line and staff on a common reporting level recognize that neither has authority over the other. Each has a different job to do, and needs different authority to make it possible.

Some Further Questions

Should personnel stand and wait to be called or should it volunteer its services? Though in some instances personnel may find it advantageous to wait until its help is asked, it is responsible for keeping itself informed about the problems confronting the line. Hence, it should proffer advice and service where it believes it is needed and without being specifically invited. Staff is most valuable when it thinks ahead, makes constructive plans, and helps the line solve its difficult operating problems.

The question also arises whether the line is obliged to accept the programs and suggestions advanced by the personnel staff. Obviously, line should give serious consideration to all offers of advice and service by personnel. Line heads should call upon staff in all matters where it possesses wider experience and more knowledge than is available within their own units. Where there is doubt, the sole criterion for acceptance of the advice should be whether it is in the company's best interest to do so. Nevertheless, line managers should have clear authority to accept, reject, or modify the advice or service proffered by personnel staff. The only exception is in those cases where top line management, as a matter of policy, has decided that such personnel services as job evaluation, training, contract negotiation, or recruitment will be used by the line organization. This decision is binding at all levels.

Where there is disagreement as to whether staff recommendations should be followed, both line and personnel staff should have a right of appeal to higher line authority. However, when the exigencies of the operating situation so require, this right of appeal should not be permitted to supersede line's authority to make immediate decisions.

The role outlined here provides a sound basis for harmonious working relationships between line and personnel staff. While variations and modifications will always be occasioned by the personalities involved and the immediate operating situation, it may serve as a useful pattern for executives concerned with making use of all available resources in developing maximum productivity and teamwork.

. . . Of all the forces at work in establishing a company's standing in the community, the most potent may well be what employees say about it on the outside. Do they talk the business up—or talk it down?

Employee Attitudes: The Key to Better Community Relations

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A FAMILIAR THEME among public relations men is that business begins with public permission and exists by public support. What the public gives, the public can take away—hence the success of a business depends on earning and keeping the public's esteem.

A truism, perhaps. But—*how* actually does a business earn and keep the public's esteem?

Try this exercise on yourself: How do you form *your* opinion of the local department store, the power company, or the telephone company? From their advertising, perhaps? From their annual reports, their contributions to local charities, their open houses?

Or is your opinion of a company in your community based mainly on (1) your knowledge of its products or services, and (2) the contacts you have had with people who work there?

In the telephone business, we have been saying for a long time that employees are *one* of our most effective forces in public relations. Now we believe that they are probably *the* most effective. This conclusion is based on experience, observation, deduction—and, in the final analysis, common sense. But, since common sense often sounds more "sensible" when it can be demonstrated in a chart or expressed statistically, some statistics may be appropriate here.

For a number of years, we have made a practice of carrying out nationwide surveys of what customers think of our service, our rates, and of the company as an institution. On the basis of this information, we can separate customers who know and talk

NOTE: This article has been adapted from a paper presented at AMA's Special Personnel Conference held at Colgate University in July, 1956.

to employees about the telephone business from those who don't.

These surveys show that customers who know and talk to employees about the telephone business have a significantly better opinion of the company than those who don't. The surveys also show that customers who know and talk to employees have a somewhat better attitude toward the cost of their telephone service. However, the difference is not so large as in the previous case, according to the most recent survey. It seems that public attitude toward cost is not particularly affected by the "talking employee."

Negative Ambassadorship

This phenomenon of the "talking employee" has acquired the somewhat unfortunate name, "ambassadorship." Since an ambassador is your representative, the presumption is that he represents you favorably. The trouble is, employees do not always represent you favorably—thus confronting us with the phenomenon of "negative ambassadorship."

Negative ambassadorship came forcibly to our attention a few years ago when we sent a research team into two communities to do some digging into public attitudes. We wanted to know the underlying reasons why people in the one town had a good opinion of the company, while people in the other had a poor opinion of it.

There were, actually, a number of reasons for this. For instance, service was considerably better in one town than in the other. But, in *both* towns, the researchers found that "talking employees" were influencing public opinion: In one community, employees were talking us up; in the other, many employees were talking us down. And three-fourths of the people interviewed said that employees were their chief source of information about the company.

Some Research Findings

Other research pointed in this same direction. For example, in studies made by Opinion Research Corporation in six communities in 1946 and 1951, about three-fourths of the respondents said that they formed their opinions of a company by talking to its employees. Other more recent research, also conducted outside the telephone business, has come up with similar findings.

Despite such confirmation from other sources, we felt that "ambassadorship" needed some further probing. In 1954, therefore, we sent research teams into three other cities with instructions to bring us a detailed report on the anatomy of the "talking employee." Out of 1,000 depth interviews, the following conclusions emerged:

1. The employee *is* a vital influence on public opinion.

2. For the most part, his influence is favorable, but it may be distinctly unfavorable—often it is a mixture of both.

3. Relatively few employees actually initiate discussion about the company with outsiders. Usually they talk only in response to questions or to a challenge. However, if they can't answer the questions or meet the challenge, they feel uncomfortable and embarrassed.

4. The public *expects* the employee to be able to answer questions about

his company. The public regards him as an "insider," someone "in-the-know," and whatever he says carries weight. But if the employee is not well informed, the public blames the company, not the employee.

The Anatomy of Ambassadorship

Our interest in ambassadorship led us to a number of intriguing questions. For instance, what do we know about the process—the communications process—by which employees become good ambassadors for their companies? Are human beings so complex, so unpredictable, that ambassadorship must be regarded as a windfall, or are there some governing principles behind it? Can employees be stimulated to talk favorably about the company to their families, friends, neighbors, and acquaintances? If so, how is this to be done—should we simply fill the employee with information and send him forth?

We attempted to come to grips with these questions by analyzing typical employee reactions as revealed by depth interviews. Here is a sample of what employees say about themselves as public relations ambassadors:

> ¶ I haven't taken advantage of opportunities to present the company's viewpoint because I'm afraid I wouldn't be able to do it so the result would be favorable to the company. So I just take the middle path and don't take a negative position either.

These are sad words to company ears. The young woman is telling us that she doesn't support the company's position in an important rate case. Yet we know that she has been given the whole story—it was in the company magazine and in a bulletin sent to her; she was taken to a meeting where a trained leader explained the company's position in detail; and at the close of the meeting, she was given a booklet that repeated what the leader had told her. What went wrong here?

Take a few more samples:

> ¶ I enjoy talking. I like people, so I suppose it just comes natural to me. You can hardly be in a group—the fact you are employed by the company—that some question isn't asked.
>
> ¶ If people approach me with questions, I just tell them the best thing they can do is call the office. I'm not good at explaining anything.

After puzzling over hundreds of such interviews, one begins to see what lies underneath the words. There is very little logic, but a great deal of sentiment: enthusiasm and loyalty on the one hand, and on the other, insecurity, resentment, indifference, sometimes hostility—in short, what employee relations men call "attitudes."

Summarizing these attitudes in the language of professional researchers, we arrive at what might be called the anatomy of ambassadorship:

1. How much an employee is *told* or *knows* about the telephone company seems far less important in determining his effectiveness in public relations than his basic satisfaction with his job.

2. The way employees feel about their jobs and about the company affects not only what they do and say in public, but how they receive and appraise information from the company.

3. Most employees indicate clearly that they don't want or need to know *everything*. But they feel more com-

fortable and can do a better job of ambassadorship if they have some facts to fall back on when outsiders raise a question or a challenge.

As we interpret these findings, employee attitudes are the underpinning of public relations efforts in the community. Here is tangible evidence, surely, that the work of the employee relations department is closely connected with that of public relations.

The Problem of Communications

But these findings suggest other connections as well: How effective are company communications with employees? And how do employee attitudes affect communications?

Keeping employees well informed has always been a major objective in the telephone business. Historically, it has been the function of the public relations department to prepare magazines, newssheets, booklets, charts, etc., to keep employees informed about the business. And we thought we were doing a pretty good job.

But these surveys uncovered some weak spots. It seems that the company may pump information into an employee, overwhelm him with facts, send magazines and bulletins to his home, show him films—and all this may come to nothing. If the employee is dissatisfied with his work and his attitude is poor, the chances are that he won't go out and do an effective public relations job for the company.

Getting the facts across is necessary, of course, but it is not sufficient. Let me put it this way: *Attitude* is the key to whether an employee tries to do a job in the company's behalf; *facts* help him succeed, once his attitude is favorable.

Reaction to Content

Again, in the course of these surveys, employees had a great deal to say also about the *content* of our informational activities. From these comments, we concluded:

1. Very often, company communications to employees fail to reach them, let alone get passed on by them to others, because the information is not actually absorbed or understood.

2. Much of what is communicated lacks interest or personal reference for employees.

3. Some employees feel that we give them too many facts at once; they can't remember all they are told even if they try to.

4. Some kinds of factual information seem to have only a limited employee audience.

These findings refer to weaknesses in our formal or printed communications rather than in regular day-to-day communication between employee and supervisor. In our formal communications, do we tend to emphasize what we, as management, believe employees *ought* to know rather than what they *want* to know? Perhaps we should listen more closely to employees and discover what kinds of information they need. As some employees have observed: "If the company wants us to be interested in *its* problems, then the company should be interested in *our* problems."

Reaction to Specific Media

To take this a bit further, here is what employees tell us about the *ways* in which we communicate with them:

1. Small, two-way meetings are most effective *if* (a) the atmosphere is such

as to encourage free discussion and upward communication; and (b) groups are small and informal (six to 10 people).

2. The supervisor's role as communicator varies tremendously, depending on such things as: (a) his own personality and how well trained he is as a communicator; (b) his relations, in other connections, with the employees to whom he is communicating; (c) whether he is accepted by employees as an authority on the subject under discussion; and (d) how much he believes in what he is asked to do. (The role of the supervisor appears to be of first importance. In other research, employees told us they were getting *most* of their information about the company from printed matter, but would *prefer* to get it from their supervisors.)

3. Movies seem to have greater impact than printed matter; they are most valuable, however, when followed by discussion.

4. Written materials—unless they have at least local or, ideally, personal references—are the least effective means of communicating information to employees. There is almost universal resistance to reading bare facts and figures.

These findings should not be interpreted as minimizing the importance of the printed word. Communications is a process, a flow that comes from many directions and many sources, and certainly the printed word is an essential element in the process.

But perhaps we have relied too heavily on the printed word, on media, devices, and techniques. Perhaps we are overlooking the *basic* need: how to improve face-to-face communications between supervisor and employee. As one writer has said:

> Piling on gimmicks while neglecting [the] primary situation, where nine-tenths of industrial communications takes place, is like filling a new house with electrical appliances but neglecting to run a wire to the power line.*

Role of the Employee Relations Department

We anticipate that any improvement in face-to-face communication will come through a coordinated approach by public relations *and* employee relations people.

Face-to-face communication is not a simple matter and there is no simple formula for handling it. It is as complex as the people who take part in it. Some people are, by nature, introverted, shy, poor communicators. Some people are born with the skill, others manage, in the course of time, to acquire it, and some have it thrust upon them.

Employee relations people can do a great deal to help supervisors acquire skills in communication. Recently, for example, a telephone company, having important information to get across to all employees, presented the facts in a management bulletin under the headline: "Discuss this with your people." In other words, supervisors were *commanded* to communicate with their people. Later, however, the company found that very few supervisors had passed on the information. Why not? The supervisors argued that they weren't accustomed to handling this sort of

* "Face to Face," PERSONNEL, November, 1955, p. 184.

material; it wasn't job-related; they needed training in how to talk to employees and how to hold a discussion.

The company took a rather surprising step: it suspended publication of its management bulletin. Then the personnel department brought hundreds of supervisors together, in small groups, and put them through a three-day course called "Talking With People." When this training program was finished (it took an entire summer), the company resumed publication of the management bulletin, more confident that now the bulletin would be used as a discussion "tool."

Training supervisors in communication skills is certainly one of the major contributions that employee relations experts can make to better public relations.

Attitudes and Communications

There remains, however, the biggest problem of all: How can employee attitudes be improved? If attitudes are the *key* to whether employees *try* to do a public relations job in the company's behalf, must industry "fix" employee attitudes before there will be any tangible improvement in the community's opinion of a company?

The ostensible causes of poor employee attitudes are well-nigh innumerable. Job tensions; dissatisfaction with wages, hours, status; faulty procedures and policies; and a host of outside influences—these are root causes of unfavorable attitudes.

But there is another and tantalizing possibility, practically unexplored: How often is faulty communication also involved?

In our business, for example, we often hear it said that some telephone operators develop poor attitudes because they must work odd hours, split tricks, and holidays. Yet the element of communication keeps coming into the picture. Witness this observation made by researchers after a series of depth interviews with telephone operators:

> The girls were given a presentation on the peaks and valleys of the telephone traffic pattern in the community. Afterwards, these girls said they had a new understanding of the company's needs and were more favorably disposed to be cooperative.

It is evident that good communications contributed to understanding and improved attitudes.

It may be significant also that faulty communication, or lack of communication, often seems to be reflected in complaints on specific issues that apparently have little to do with communications. Dr. Alex Bavelas, the communications expert, uses the medical term, "referred symptoms," to describe this phenomenon. Just as a person with fallen arches, for example, may get a pain in the back instead of a pain in the feet, so, in an industrial situation, if there is a breakdown in communications between supervisor and employees, the employees rarely say, "Communications in our group have broken down." Instead, they may complain about the ventilation, or the food in the cafeteria, or anything else that irritates them at the moment.

Some Unexplored Problems

Much remains to be done toward improving communications. For one thing, employee relations people can

become much more skillful in diagnosing communications breakdowns, and public relations people can become much more skillful in prescribing what to do when a communications breakdown has been identified. But we do not know enough as yet about the communications process. There are three areas in particular which need further investigation:

1. *What employees want to know.* This area is concerned with the interest of employees in such matters as how to do their jobs, how they stand with the company, how things affect them personally.

2. *What employees need to know.* This area covers what outsiders expect employees to know about the company, such as information about its products, services, and prices (not *everything* about the company, of course, but the questions that outsiders are likely to ask in the ordinary course of events.

3. *What the company believes employees ought to know.* This is the most difficult area to explore. If information is entirely new, employees may have no interest in it or need for it. And we suspect that such information will not be readily absorbed or understood until it is converted, by communicative skills, into information that employees genuinely *want* or *need.*

Does Information Improve Attitudes?

One more problem merits attention. If employee attitudes are so important to effective ambassadorship, can we actually *depend upon* communications to improve them?

Most people seem to think so. Writers of industrial relations textbooks insist that well-informed employees have better attitudes; editors of industrial publications take credit for improving employee attitudes; and even common sense would seem to support these claims.

In our company, we too were convinced of them. But when we attempted to prove the proposition, we found little supporting evidence.

What evidence we do have seems to suggest that keeping employees informed *does* improve attitudes, but that the critical factor is the *way* in which communication is carried out.

One piece of evidence comes from a recent experiment by one of the Bell companies in which thousands of vocational employees were placed in small group-discussion meetings to learn about the company's financial problems. (A very complicated subject!) Afterwards, thousands of questionnaires and a number of validating depth interviews were used to evaluate the effect of the meetings on employees' *belief* and *understanding.* Here are the findings:

1. In those meetings where there were lively discussions and a two-way exchange of information employees acquired a strong belief in the company's position and a much better understanding of the facts.

2. In those meetings where there was little discussion and the leader read from a manual or did all the talking, employees were bored or resentful. Their belief in the company's position was weak and they retained little information.

To sum up: *participation* improved belief and understanding.

In a second study, two comparable cities 400 miles apart were selected, one for study, the other as a control.

In both towns, special surveys of customer attitudes and employee attitudes were conducted. These were benchmark surveys. Then, in the study town, supervisors gave employees a concentrated dose of facts about company business, policies, finances, etc. The supervisors had been given visual aids and flip charts, but they soon abandoned these crutches and conducted their meetings informally, with full two-way communication. Meetings lasting an hour to an hour and a half were held weekly for 14 weeks.

During the course of the experiment, circumstances in the two towns remained the same and no new variables intervened. At the conclusion of the project, the experimenters took another survey of attitudes.

The findings were as follows:

1. In the control town, customer and employee attitudes remained unchanged or deteriorated.

2. In the experimental town, employees showed improved attitudes toward (a) the company as an employer and its position in relation to other businesses, (b) profits, (c) the company's reputation, and (d) the company's sincerity in trying to keep costs down.

3. Although employees showed no greater disposition than before to volunteer information about the company in their contacts with customers, a marked qualitative improvement in their "ambassadorship" was noted. Customers were better satisfied with the way employees answered their questions, and more customers said that the men were very well trained or talked interestingly about their work and the company.

4. While, in the control town, no change in productivity was observed, in the experimental town productivity improved 10 per cent, despite the time devoted to the weekly meetings. (Meetings were held on company time and came out of production hours.) It is not claimed that the information program *caused* this improvement. But the informational activities did not *hurt* production.

The company drew the following conclusions from this experiment:

1. A well-designed information program will bring improvement in employee attitudes.
2. Improvement in employee understanding can be definitely measured.
3. Participation by employees in an information program develops job attitudes that are reflected in more efficient work.
4. Improvement in the quality of contacts from the customers' viewpoint was evident. The end value is a matter of growth.

In summary, these are the main thoughts suggested by these studies:

1. Attitude seems to be the key to whether the employee wants to represent his company favorably in the community; facts help him succeed.

2. Since attitude is the key, the public relations effort needs the coordinated backing of those who understand employee attitudes best—the employee relations people.

3. Participation and two-way communication increase belief and understanding.

4. The effect of informational activities on employee and public attitudes appears to be tangible and measurable.

. . . Evaluating its two years' experience in training first-line supervisors through group discussion, Pillsbury Mills has found that the conference method can help to develop more favorable attitudes, as well as to eliminate specific operating problems.

Supervisory Training: The Conference Method

LUDWIG HUTTNER and JOHN ZIMMERMAN*

Pillsbury Mills, Inc.
Minneapolis, Minn.

LEARNING THROUGH conference participation is the keynote of the training of first-line supervisors at Pillsbury Mills, Inc. Other companies already using the conference method or contemplating its adoption may be interested, therefore, in this account of our experience and the techniques we use for evaluating our program's effectiveness.

Our approach to the problem of training was based on two major premises:

1. *Training is successful only when it modifies those attitudes which affect behavior.*
2. *The learning process is best accomplished through the study of real and meaningful problems.*

On these assumptions, we began by questioning our key production personnel on their ideas about a supervisory training program. They were agreed that while there was a wealth of skill, experience, and ability among the ranks of Pillsbury supervisors, there was also considerable room for improvement in operating efficiency. After careful consideration of their views, we came to the conclusion that our training needs could best be met through group discussions in which each participant would contribute his experience and knowledge to the solution of specific plant problems and at the same time learn from the contributions of others.

The prerequisite of a successful conference is, of course, a qualified leader. Hence, the first step in our program was the careful selection and training of the men who were to lead the various discussion groups. The leaders for each plant were selected

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by local plant management on the basis of qualifications outlined by our Manpower Development Department. Most of those selected were in staff positions. Some, however, were production supervisors or, in the smaller plants, plant managers. All were released from their regular jobs during the training program.

At the outset, the men were brought together for a week of concentrated study of conference procedure. Two days were devoted to the theoretical aspects of such topics as the learning process, group dynamics, motivation, criteria for evaluating supervisory behavior, and the conference technique. The rest of the week was devoted to workshop sessions in the use of the conference technique and related methods. In these sessions, each participant had the chance to act as leader, as well as observer and critic.

At the present time, the program covers more than 375 management people, from first-line supervisors through plant managers, at 13 plant locations. Certain key staff personnel at each plant are also included, as well as 45 observers from headquarters. Headquarters personnel are present, first, to keep them in direct touch with the progress being made locally, so that they can discuss the program intelligently and help to "sell" it at the plant level; and second, to help them improve their own management techniques.

No conference group exceeds 15 participants. Thus, there may be as many as eight groups in one plant and only one group in others. Where a plant has more than one group, each group is so organized as to comprise a representative cross section of supervision, both departmentally and organizationally.

Participation in the program is voluntary, but those who enroll are expected to attend regularly.

Content of the Program

Before the program started, a large group of supervisors was polled as to the order in which the various elements of the management job should preferably be covered. Their selection was as follows:

1. Definition of the job of management.
2. Communications.
3. Human relations.
4. Industrial relations.
5. Safety.
6. Quality.
7. Cost control.
8. Industrial engineering.
9. Supervisor's training responsibilities.
10. Public relations.

Accordingly, the program has been organized under these 10 heads, each of which is called a "series." Each series is divided into a number of two-hour conference sessions.

The preparation of training materials and the general conference procedure are the responsibility of the Manpower Development Department. In preparing the materials, Manpower Development works in close cooperation with the appropriate staff department, to make sure that the best thinking and latest research in the area has been incorporated. These training aids, which are designed to be inserted in the loose-leaf manuals given to each participant, are clearly and simply written, attractively printed, and illustrated with cartoons

where appropriate. They include worksheets, checklists, and other "tools."

An example of the type of material provided may be seen in the insert shown in Exhibit 1.

Conference Procedures

The actual conduct of the conferences at each plant is left to the local plant trainer, who is responsible for preparing for the meeting, previewing the visual aids, and planning the approach generally. To help him in his preparations, the Manpower Development Department provides him with a "suggested procedure" for each conference session. A typical outline of this kind is shown in Exhibit 2. As their title implies, these suggested procedures are not intended to be in any way directive. Once the plant trainers become skilled in conference techniques they are encouraged to depart from the outline in any way they think desirable.

The conference groups meet twice monthly. In each plant, the supervisors themselves decide whether the meeting shall be held on or off company time, over dinner, and so on. The company pays for all expenses incurred in connection with the meetings.

The success of the program depends on the ability of the trainer to relate the necessarily general information given in the manual material to the specific problems of the participants. For example, in the section of the Industrial Relations series entitled "Know Your Contract," there is a questionnaire on the union contract. If the trainer has the "feel" of his group, he will select for discussion those aspects of the contract which may be causing problems in that particular plant and will encourage the group to work out recommendations for eliminating or reducing them. To emphasize once again the second of our two basic premises, significant learning takes place when the trainees come to grips with the actual problems encountered in their daily jobs.

Evaluation of the Program

To evaluate the success of a training program is always extremely difficult. At Pillsbury, management takes the over-all view—that all training efforts should aim at improved performance, and, hence, profits, and that all-round progress toward this goal is more important than pinpointing credit in specific areas. Nevertheless, we do have several measures whereby we endeavor to evaluate the effectiveness of our program:

1. *Training reports.* After each two-hour session, the plant trainer completes and submits a report covering such matters as attendance, participation, the degree of interest manifested by the participants, evaluation of the training materials, the progress noted, and follow-up. The Manpower Development Department uses these reports as guides to the status of the program at each plant and also as indications where effectiveness and content can be improved. Periodically, these reports are edited and combined into a general summary which is circulated to all trainers.

2. *Behavioral analysis.* Before a series starts, the trainers obtain from each trainee's immediate supervisor

(Text continued on page 257)

Series No. 6 – C

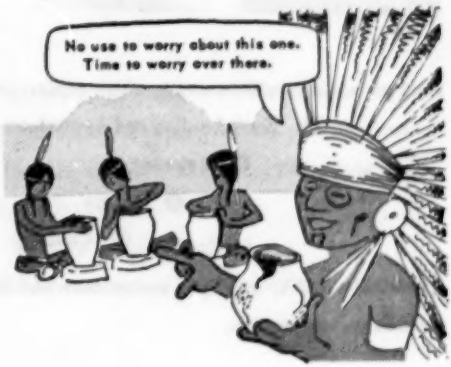
SUPERVISION CONTROLS QUALITY

WHO "CONTROLS" QUALITY?

Quality Control ...

- **Inspects raw materials and ingredients ...**
- **Defines standards ...**
- **Develops operating procedures (as they affect quality) ...**
- **Inspects finished products for acceptability ...**

In addition, quality control does some in-process inspection through periodic net weight control, quality aid assistance, etc. However, Quality Control has little or no means of "controlling" quality between these steps, since "control" means building quality into a product.



LINE SUPERVISION – THE ONLY CONTROL OVER QUALITY

The supervisor is the only person in a position to control quality on a PREVENTATIVE rather than a REMEDIAL basis. The supervisor, through his employees, is the only person in management who can prevent off grade and non-standard production before it becomes an unpleasant fact. Quality Control can provide valuable assistance to supervision, but it cannot do the job.

EXHIBIT I (Page 1)

Manual Material—Quality Series

PREVENTATIVE QUALITY CONTROL?

Every act performed by any employee has a direct effect on the quality of the product. Developing a constant awareness of quality in each employee rests primarily on the shoulders of supervision. When we have established with our employees the "frame of mind" that each act of work they perform has a direct bearing on quality, we will have preventative quality control.

Here are some specific areas in which supervision must control quality!

- **Housekeeping and sanitation**
- **Maintenance**
- **Storage**
- **Loading**

All are affected by employee performance and attitude which, to a large extent, depends on supervision.

HOUSEKEEPING AND SANITATION

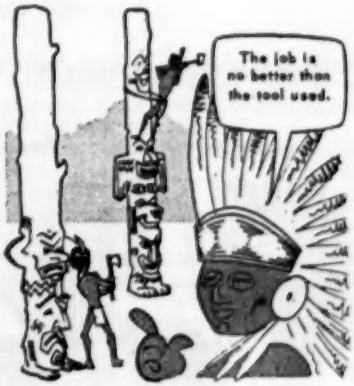
Rigid control over these areas is essential for reducing insect and rodent infestation, dirt, foreign matter, etc. which appear in our products, and for the general appearance of our plants and equipment. It is not easy to keep the place looking all the time as it does when a group of VIP's are going through. Sweeping and clean-up are not very attractive or rewarding. However the job can be done if supervision is continually alert and shows genuine interest.

EXHIBIT I (Page 2)

Manual Material—Quality Series

MAINTENANCE

Proper maintenance is extremely important because it affects net weight, package and case seal, code marking, visual appearance, formulation, etc. This becomes doubly important when we are dealing with old equipment, inexperienced employees, etc. A supervisor under such conditions must do his utmost to insure top-notch maintenance, and train as thoroughly as he can.



STORAGE

Proper storage and stock rotation are essential in the food processing industry. Old or damaged stock presents us with horns of a dilemma from which there is no out. If it is shipped we lose custumers. If it is reworked, we lose money.

What is the solution?

Careful and alert warehousing to prevent the problem from occurring.

LOADING

Quality in loading is of paramount importance. We lose all of the quality we have built into a product when it arrives at its destination in an unsaleable condition. The only answer to reducing the magnitude of this problem is constant alertness on the part of supervision to see that correct and acceptable loading practices are followed at all times. Staff departments are ready to assist in providing better methods, materials, vehicles, etc., but only the supervisor through his counters, checkers, and loaders can effectively control this quality problem.

EXHIBIT I (Page 3)

Manual Material—Quality Series

HOW CAN THE SUPERVISOR BEST CONTROL QUALITY?

Employee Motivation | Employee Training | Inspection

- **Employee Motivation ...**
  Instill the desire to do a top quality job.
- **Employee Training ...**
  Instruct in methods which will insure the highest quality.
- **Inspection ...**
  Oversee each operation as often as possible.
  Make each employee an alert quality inspector.

In the following sections we will examine some of the actual quality problem areas with a view toward how Quality Control can help supervision.

EXHIBIT I (Page 4)

Manual Material—Quality Series

Suggested Procedure for Supervisory Session 5

Safety Series—Manual Material 5-E

You might begin by stating, "In the first session we said that unsafe acts of persons, or man failure, are responsible for 88 per cent of all individual accidents. Portions of the remaining 12 per cent are also caused by man failure. Here, then, we must concentrate our efforts."

"What can we do to eliminate or at least reduce the personal causes of accidents?" Solicit answers from the group and write them on the flip sheet pad. Look especially for answers such as these: (1) Safety orientation (general safety rules); (2) job safety training (the correct way to do your job); (3) general safety retraining (training on new jobs, etc.). When you have placed these and other points on the pad, begin a discussion point by point. Pre-reading the manual will give you some guides for leading the discussion. Spend about half an hour on this discussion.

You have an excellent opportunity for using a role-playing technique —either the sneak approach or a formal setup. For example:

1. A new employee safety orientation interview.
2. A job safety instruction for a specific machine.
3. An accident interview.

Let a couple of people play the roles with the rest of the group acting as critics. Discuss each situation when the role-playing part is finished. Get as many different opinions as possible and then try to have the boys reach a group decision on the best method.

After you have presented and discussed several role-playing situations, you might give the group some critical incidents. Solicit individual suggestions and then try to get group agreement on the best way to handle the incident. Here are several examples. You arrive on the scene as:

1. A man is lifting a 100 lb. sack incorrectly.
2. A man is cleaning a machine with a sack wrapped around his arm.
3. A man is riding the manlift with his lunchpail and a floor broom.
4. A man is carrying two 2,000 lb. pallet loads, double decked on a 2,000 lb. truck.
5. A man is pulling a loaded four-wheel skid.

Spend a few minutes summarizing the session and explain that next time you will investigate some of the ways of maintaining and stimulating employee interest and cooperation in safety.

EXHIBIT 2

Conference Outline for Guidance of Trainers

an analysis of his behavior in the area in question. Here it should be emphasized that this analysis is not qualitative. The only question we are interested in is, what does this trainee do—or not do—in this area? Three or four months after the series has been completed, the trainee's behavior is analyzed again. What does he do differently (and presumably better) from what he used to do? By comparing both evaluations we have at

least an approximate idea of how far the program has been successful in changing attitudes and behavior.

3. *Informal reports.* Comments and observations on the program are frequently passed on to us by headquarters personnel, both production and staff, who make periodic visits to local plants. Though, individually, these comments may not be representative, taken as a whole and over a period of time they reflect accurately enough the general feeling about the program and its progress.

4. *Plant visits.* We have found that one of the most effective ways of measuring the success of the program is to have our own people from the Manpower Development Department visit the plants and talk to the actual trainees. During these visits, we also talk with the plant trainer and plant management and attend whatever conferences may be going on at the time. This gives us a continuing "feel" on how we are doing.

To date, the program has been in operation for about two years at eight of our plants, and for about one year in the remaining five. In most of them, all the available evidence shows that we are making satisfactory headway. Some plants, in fact, have made exceptional progress; others are only average. In many instances, we have found that specific plant problems have been either eliminated or noticeably reduced as a result of the conference sessions. We have also noted desirable changes in attitude on the part of many trainees.

Both at headquarters and locally, top management is convinced that supervisory training is making a significant contribution to Pillsbury's improved profit position. Of course, we are all aware that behavior cannot be changed overnight and that the process of inculcating the right attitudes must inevitably be a slow one. Accordingly, we have planned our program for three years ahead, and we intend to continue this type of training indefinitely.

Longer Life for American Workers

THE AVERAGE lifespan of American workers and their families has reached the Biblical three-score and ten, according to a study of its industrial policyholders made recently by the Metropolitan Life Insurance Co. The provisional mortality data for 1955 show that life expectancy among policyholders rose to a new high of 70 years. This represents an increase of nearly one-third of a year since 1954, of five years during the last decade, and of nearly 24 years since 1909.

. . . In their search for executive talent, more and more companies are discovering that the man behind the drawing board possesses qualities that are particularly well adapted to the managerial role.

Making Managers Out of Engineers

GEORGE S. ODIORNE
Director
AMA Intra-Company Program

NOT LONG AGO, the writer carried out a survey of some 100 senior engineers in an Eastern engineering school. Among other questions, they were asked, "Do you expect, eventually, to become an executive?"—to which about 80 per cent replied, *Yes*. An informal check with professors of engineering in several other engineering schools has shown that their impressions, based on contacts with students in curriculum and guidance interviews, bear out this approximation. Even assuming that many students are thinking of technical administration rather than general management positions, the indications are that engineering students have a decided orientation toward management.

These findings may afford some comfort to the company engaged in the quest for new blood in management—that perennial problem on the executive agenda. If the search for managerial talent, like charity, begins at home, a company may be well advised to look to its engineers—present and future—to provide the raw material for executive development.[1] But the case for engineers as managers hinges on certain basic questions: Will engineers make good managers? Do they *want* to become managers? What assets or liabilities, incurred in the course of a highly specialized training, will the engineer bring to management? And, given a favorable

[1] It may well be, of course, that an "ivory hunt" in the engineering department is inadvisable on other grounds. For one thing, the shortage of engineers is already critical and shows no signs of being alleviated in the foreseeable future. By dangling offers of a private office, wall-to-wall carpeting, and a key to the private washroom, a company may well find that it has traded a good engineer for a so-so manager. Perhaps the only solution is to let it be known that management positions are open, place some moderate hurdles against entry in front of the engineer, and count on the ones who are highly motivated toward supervision to overcome them.

answer to these questions, what types of training will be most effective?

It is the purpose of this article to adduce such evidence as we have on these questions and to appraise the experience of several large companies in introducing management development programs for engineers.

The engineer himself takes the first step toward management in expressing a desire to leave purely technical or scientific work for a supervisory position. Indeed, a primary trait of the successful supervisor, as several studies have shown, is a decided preference for a managerial job.

The Problem of Motivation

Unless the engineer has such an inclination toward management—if he is merely seeking an "out" from the engineering department, for example —there is little probability of his success as an administrator. Not that incentives are lacking to jump the engineering ship. Surveys by the engineering societies show that the salary of a mechanical or civil engineer averages about $200 per year less than the average compensation for foremen as reported by an AMA survey. Furthermore, a study of one large electronics company discloses that engineers receive less pay, computed on an hourly basis, than certain craftsmen: carpenters, painters, electricians, bricklayers, plasterers, and masons. However lamentable this situation may be from the engineer's viewpoint, the urge to escape the category of cheap labor is not of itself sufficient to assure success as a supervisor. The principal motivation must be a desire for the greater responsibility and authority which go with supervisory rank.

Granting the importance of motivation, it is necessary to inquire further: What are the interests of a typical engineer? Are these interests compatible with his desire to be a manager? Are they indicative of probable success or failure?

The Interests of the Engineer

In a recent study of mechanical engineers,[2] it was found that engineers have a strong mechanical and technical interest, enjoy sports and outdoor life of an active sort, and are quite conventional in their social and political views. On the other hand, they tend to have little interest in the social sciences or in human relationships, are not inclined to verbalize freely, and have few intellectual or aesthetic leanings aside from those which are of mechanical or material interest as well.

It might be deduced from this study that engineers are deficient in many of the areas which occupy the attention of the supervisor. Their lack of interest in human relations, for example, and the incapacity for verbalization might seem to be irremediable defects. Yet we must look beyond the mere question of interests in deciding whether or not the engineer has the capacity to become a manager. If we accept Lawrence Appley's concept of management as "an orderly, rational, human approach to the problems of doing business," it may appear that the engineer has other qualities which fit these specifications and more than compensate for his weaknesses in other respects.

[2] Ross Harrison, Winslow Hunt, and Theodore A. Jackson, "Profile of the Mechanical Engineer: II. Interests;" *Personnel Psychology*, Autumn, 1955, pp. 315-330.

In engineering schools today, the trend is overwhelmingly toward training the engineer as a scientist rather than as a technician. According to a *Business Week* survey,[3] the past 10 years have seen drastic revisions of engineering curricula. Under the proddings of professional associations and accreditation groups, an effort has been made to build into the engineer more of the three basic subjects —mathematics, physics, and chemistry. Fewer courses are offered in specific industrial methodologies; instead, the curriculum is designed to provide a broader scientific outlook and a more rigorous training under instruction standards which are merciless compared to those of many liberal arts or business schools.

The Engineering Mind

Such a disciplined training gives the engineer an objectivity which is particularly well adapted to the managerial role. To the scientifically trained man, the frontiers of knowledge and truth are measured only by his own capacities. He does not tend to personalize his problems in the form of some malevolent individual but sees them as truths which escape him because of his own shortcomings in knowledge, understanding, or experience.

As a supervisor, such a man would not regard the shop steward as an actual fiend seeking to oppose him with diabolical countermeasures; rather, he would view steward-supervisor relations as a problem amenable to solution if the supervisor is adequately informed, intelligent enough to understand the many variables facing him, and skilled in dealing with them. The engineer's first asset as a manager, then, is his training in handling problems objectively.

A second asset is the sense of integrity which he brings to his work. A mind fired in the kiln of the engineering curriculum and rigorously trained to seek out the closest approximation to the truth is admirably suited to undertake the management function —the conduct of business affairs in an orderly, rational manner.

To be weighed against this quality, however, is a certain lack of confidence in people which engineers often display. While the engineer is objective in his approach and unceasing in his search for the best solution to a problem, he may be deficient in his understanding and tolerance of human failings, demanding of his workers the perfection of performance which he demands of himself. This is one of the areas where a broadening of outlook is essential.

Nevertheless, it would be an oversimplification to lump all engineers into one category and to conclude that the engineer is a barbarian simply because he has a bachelor's degree in mechanical engineering. On the contrary, the trend in engineering education seems to be toward increasing emphasis on the humanities. Some 30 major engineering schools (including such top-flight institutions as M.I.T., Columbia, Lehigh, California, Princeton, and Rutgers) now offer combined degrees in the engineering sciences and the humanities. This year, the Engineers' Council for Professional Development officially recommended to the schools it accredits that all en-

[3] "A New Kind of Engineer," *Business Week*, May 21, 1955.

gineering courses be supplemented by required courses in the liberal arts and humanities. Hence it is possible for the personnel manager, after some screening, perhaps, to find a candidate for supervision who combines the disciplined mind of the engineer with the broader outlook of the humanist. The possibility of such a find presents a real challenge to the seeker after managerial talent.

Given an engineer with the desire to assume managerial authority and responsibility, the problem then arises: What career plan should be mapped out for him? Are his responsibilities to extend no further than the supervision of technical personnel—or can he ultimately be expected to head a major department, such as production, maintenance, or sales? Whatever his final goal, what specific training program is best calculated to facilitate his transition to the managerial sphere?

Many large companies are now facing this problem. Out of their experience—and the author's own extensive work in this field—some clear-cut patterns are beginning to emerge.

SOME COMPANY PROGRAMS

At present, company supervisory training programs for engineers seem to fall into two main categories: (1) the "technical forum" and (2) the adaptation of training techniques to the special needs of the engineer.

Technical Forums

An indirect means of interesting engineers in a management career and improving their administrative skills is the introduction of management-oriented speakers and topics into meetings established primarily for technical orientation or communication.

The "tech forum" plan entails bringing together engineers, scientists, and other professional-technical men for two or three days to survey technical and research developments throughout the company. The enthusiastic response of research men to this "wholesale technical conference" provides a good climate for the discussion of management problems by general management executives.

Minnesota Mining and Manufacturing Company, for example, runs a three-day "tech forum" for idea swapping among its research people in St. Paul. Included in this program is a session on "What Management Expects from Research and Development," in which the President, the Executive Vice President, and Vice Presidents of Sales and Research bring a general management approach to the meeting. The session is intended to orient the researchers toward general management objectives, and, without doubt, does serve to stimulate interest in the administrative aspects of technical research. Follow-up newsletters and releases keep the spirit of the meeting alive.

U. S. Rubber, and Union Carbide and Carbon limit their technical forums to project leaders and upper-rank research executives, and include among the subjects discussed the administration of research. Chas. Pfizer is reported to do the same thing on a more modest scale. Esso Research and Engineering Company holds meetings of a world-wide group of researchers to exchange information on

technical problems and, incidentally, administrative problems. Among other companies conducting such forums are Du Pont, whose 13 departments are represented in their colloquia; Dow and Monsanto Chemical; American Cyanamid, which takes its research men to a resort hotel for the forums; and Humble Oil, which holds monthly meetings for production and geophysical scientists and engineers.

The important feature of these and similar meetings is that their primary orientation is technical; the administrative aspects are of the "shoehorn" variety. The goal is most certainly not to pirate general managers from the already-too-thin research ranks, but rather to strengthen the management of technical functions, as well as the technical performance of researchers, through developing in these functional areas what Peter Drucker has termed "technically qualified and management trained" administrators.

Adapted Training Techniques

The second training pattern is evidenced in the programs of Westinghouse, General Electric, Monsanto, and the Navy Department. The main features of the first three of these programs are as follows:

Westinghouse. This company's program comprises: (1) Guided self-development of the engineer as manager by his supervisor; (2) job rotation; and (3) courses conducted in cooperation with the University of Pittsburgh in business policy, principles of organization, personnel management, and financial and accounting statements.

General Electric. At GE, engineers are recognized as part of management, and management skill is developed along with technical skill. Membership in professional associations, attendance at conventions, etc., are encouraged and easy transfer into management is provided. Management courses are offered as part of an advanced engineering program and engineers are sent to courses such as those conducted by AMA, the universities, etc. In general, the program calls for:

1. Recognition of engineers' capacities for managerial positions.
2. Careful placement.
3. Good supervision.

Monsanto Chemical Company. Monsanto includes engineers on its General Management Committee and conducts a special management course for engineers, offering such subjects as economics, psychology, finance, accounting, and humanities. The company also provides opportunity for engineering personnel to participate in community affairs.

An Off-the-Job Training Program

While he was connected with Rutgers University, the author was partly responsible for developing a company training program which represented a specific, concentrated approach to the problem of making engineers into supervisors.

The program was designed to provide off-the-job training for engineers who were, or soon would be, at the foreman level, and whose primary college training was in engineering or metallurgy. No technical courses were included in the program. Its aim was not to give occupational training but rather to stimulate thinking about

management principles and to impart the professional skills required of an executive. Three broad areas were encompassed:

1. Skill in dealing with people.
2. Facility in handling difficult administrative problems.
3. Receptiveness to new ideas.

The program comprised five units—Principles of Administration and Organization, Modern Management Methods, Communications, Personnel and Labor Relations, and General Manufacturing Management. Each unit contained from one to eight courses, and each course contained from five to 10 two-hour meetings. Altogether the program's five units included 19 courses (see accompanying exhibit).

The program schedule covered a four-year period: three years of classes, and a fourth year of internship and advanced training. During the first year, members of the group were sent to Rutgers University for a five-day course in the fundamentals of foremanship, leaving the remaining sessions to be devoted to more advanced material.

Since the task was essentially that of reorienting engineers from a technical to a managerial outlook, special importance was attached to the first two units of the program—Principles of Administration and Organization, and Modern Management Methods. Some comments on the objectives of these two units, each of which was presented in two intensive all-day sessions, may be of interest here.

Unit One. Here, the objective was to put across the simple fact that the most imperative demand upon management is skill in administration: the good administrator will be effective, and his organization successful and profitable; the poor administrator, however hard he may work at his job or however well-qualified he may be in engineering or technical processes, will fail.

While it is obvious that no training can make a good administrator out of a man with no inherent administrative capacity, nonetheless it is possible in such a course as this to help the trainee acquire some perspective on the importance of administrative and organizational ability, and to encourage the more perceptive man to develop his own techniques for effective administration.

Unit Two. The aim of this section of the program was to stimulate the trainee to think progressively about the improvement of methods in manufacturing and general management. The most recent developments in the field of methods and techniques were surveyed, and it was emphasized that most of the new "tools," while still in formative stages, have been tested and applied in certain areas and give promise of becoming the run-of-the-mill methods of the future. It was not the purpose of this unit to provide intensive training in these techniques, but rather to indicate the general trend toward sweeping improvement in methods manifested in such developments as automation, linear programming, and human relations, for example.

Another objective was to demonstrate that the new industrial revolution currently under way in American industry is based upon the progressive attitude of management. A willingness to try the new and the unex-

Training and Development Program

(Development Engineer Group)

I. *Preliminary Selection and Training Program*

General Orientation to Plant and Company	(X hours)
Foreman Candidate Training Seminar (Rutgers University)	(40 ")
Foreman Candidate On-Job Selection and Training Program (Plant)	(40 ")

II. *Training and Development Program*

	Contents	*Meetings**
Unit I	Principles of Administration and Organization	5
" II	Modern Management Methods	5
" III	Communications	
	Public speaking and conference leadership	10
	Effective reports and letters	5
	Improved reading speed and comprehension	10
	Communications within the organization	10
" IV	Personnel and Labor Relations	
	Industrial psychology	10
	Training of workers and understudies	5
	Labor law	5
	Collective bargaining and union relations	5
	Analysis of plant labor agreement	5
" V	General Manufacturing Management	
	Company accounting procedures	5
	Costs and budgets	5
	Developing and installing new methods	5
	Management of maintenance activities	5
	Quality control and inspection	5
	Production planning and control	5
	Materials handling	5
	Safety and accident prevention	10
	Total	120

* Meetings are two hours in length.

Outline of Engineer Development Program

plored, and an open-mindedness toward change have characterized American management. In every case, the successful application of a new method has required a combination of managerial talents—notably, imagination in discovering new techniques and practical common sense in applying them to specific situations.

The experience with these classes confirms the belief that engineers will respond favorably to management training. After some hesitation at the beginning of the sessions, the trainees entered enthusiastically into discussions of such issues as the functions of business (Fayol's classification found a favorable response); the delegation of responsibilities in management; and, particularly, the assessment of their own engineering training as a preparation for management.

The Basic Requirements

On the basis of the experience described here, a workable program for making managers out of engineers would seem to depend upon seven basic requirements:

1. The engineer must indicate a desire to become a manager.
2. He should be helped to define and clarify his personal objectives in management—for example, does he wish to move into general management, or become a manager of a technical group?
3. With the goal defined, a plan and a timetable for training and development should be devised.
4. In the training program, a first principle to be clarified is the *professional* nature of management.
5. Specific training measures should be carried out. These may include classes, seminars, evening courses, conferences, outside reading, job rotation, service on committees, coaching, understudying executives, advanced management courses, and use of professional societies.
6. The individual's progress should be reviewed and the plan modified as required.
7. The potential manager should be enabled to apply his newly learned skills by means of transfer, promotion, reassignment, and job enlargement.

Well planned and effectively conducted, such a program should make available to management a hitherto untapped supply of executive talent.

AMA's Directory of Local Personnel Groups

LOCAL PERSONNEL and industrial relations associations throughout the country are cooperating in the compilation of AMA's revised and expanded "Directory of Local Personnel Groups" (last published in the January, 1956 issue of PERSONNEL) which will be published in the January, 1957 issue. Such groups as have not been directly solicited for information are urged to cooperate by sending their names, addresses, lists of officers, and any available descriptive material on their functions, activities, and publications to AMA headquarters. It would also be appreciated if bulletins, press releases, and other material issued by local associations were sent regularly to AMA. All material should be addressed to The Editor, PERSONNEL, American Management Association, 1515 Broadway, Times Square, New York 36, N. Y.

. . . Every newly merged corporation starts off with a flock of personnel problems peculiarly its own—but the over-all task of assuring future harmony can be reduced to six basic steps.

Handling the Personnel Problems Of a Corporate Merger

L. RENE GAIENNIE

Vice President, Personnel
Fairbanks, Morse & Co.

MERGERS AND CONSOLIDATIONS have become so frequent these days as to arouse lively public interest. But while, to most laymen, tax considerations may seem to be the chief reason for the upswing in mergers, actually they are only one of a number of motives behind this trend. On the other hand, it is true that tax avoidance is almost the only basis for determining the *method* of acquiring another business, and that high income-tax rates prompt tax-free spin-offs, split-offs, and split-ups which require the separated business to continue in operation. Since, unfortunately, such moves do not always improve productive efficiency, the old "line" organizations sometimes find themselves in a position where financial and tax interests dictate solutions to problems which are not conducive to efficient operation.

What employees object to in these circumstances is the conflict between tax avoidance and their own conceptions of effective management and their personal interests. Most employees are genuinely concerned with the internal machinery of their company. The new tax terms may be poorly understood, or have threatening implications, especially if employees suspect that the merger or consolidation is for purposes of tax avoidance rather than increased efficiency. It is naturally disturbing to read in the newspapers that mergers are sometimes followed by spin-offs and split-ups. A person who has slowly worked his way up the organization ladder be-

NOTE: This article has been adapted from a paper originally presented at a conference, "Problems of Consolidation—Mergers—Diversification," held at Marquette University last May.

comes seriously upset when the ladder is pulled out from under him, or when, suddenly, a different ladder is substituted.

Such feelings may be irrational, but they are understandably human. There is frequently a difference between the facts and the way in which people perceive them. Human relations programs have to accept this difference and deal with people in the light of their attitudes. Feelings of insecurity form the backdrop, therefore, against which any discussion of the personnel problems associated with mergers must be conducted.

Communications and Operating Controls

Basically, the personnel administrator should approach the merger problem as he does any other. In broad outline, there are two major tasks confronting him:

1. Maintaining sound communications, both within the company and with the general public.
2. Installing internal operating controls.

Communications. Mergers and consolidations have a way of developing quietly. This is natural enough, since the element of bargaining among owners is generally involved. Forced mergers resulting from raids on ownership originate in even darker secrecy. The end product of these circumstances is that the faucet of normal communications is usually shut off. Typically, news of the pending change leaks out by rumor, sometimes planted deliberately by one side or the other. But, in any event, misinformation and apprehension easily come about, and a smooth flow of communications is extremely difficult to maintain in the early phases of merger negotiations. The principals on both sides must keep in mind the damaging effects of inadequate communications throughout the process of negotiation and until the reorganization is completed.

Operating Controls. The problem of installing personnel controls within the organization is equally difficult. Sound judgment must be applied at every level, and the new ownership must be careful at all times to reduce tensions without losing sight of primary objectives. The job of installing controls can be reduced to six steps:

1. Developing an adequate organization structure.
2. Writing job descriptions.
3. Working out a consistent compensation system.
4. Selecting employees to staff the organization.
5. Developing policies and procedures in certain special areas of personnel administration.
6. Training the new team to meet the requirements thus established.

Since each of these steps presents its own problems, they will be considered separately.

1. The Organization Structure

The first and by far the most important personnel decision concerns the organizational structure of the merged corporation. In general, a merger presents one of the following situations:

1. A smaller organization is assimilated as a subsidiary or operating division of a larger organization.
2. Two separate companies fuse into one integrated organization.

In the first case, the assimilated organization is usually taken over intact and changes do not have to be made at once. The acquiring company can time its personnel and human relations moves as convenience and good sense dictate, and the assimilated organization can carry on its operations on a relatively independent basis, at least for a while. Training, replacement, and control of overlapping can be planned and worked out as needed. From a personnel point of view, this situation is decidedly advantageous.

In the second instance, however, the newly consolidated organization is faced immediately with a number of personnel problems. It begins life with duplication throughout its organization, especially at the top. Generally, the previously independent organizations have had their own departments, such as accounting, sales, manufacturing, and personnel. Some of these may be allowed to continue side by side, but only in the exceptional case. As a rule, it must be decided at once what the structure of the consolidated organization is to be. If, as generally happens, the new organization is completely different from either of the previous ones, the problem of staffing new positions will immediately present itself.

The recent CIO-AFL merger is a dramatic example of this problem. It is well known that the merger negotiations produced a great deal of insecurity, suspicion, and competitiveness among union officials. The CIO-AFL merger is still an uneasy truce, largely because of the personnel problems involved, and there is every reason to believe that this situation will continue for some time. The case of the CIO-AFL is cited in this connection because the political nature of unions makes it easier to observe their organizational dynamics from the outside. Most industrial situations are more difficult to analyze because companies keep their internal affairs to themselves.

Whatever the circumstances, the first personnel move, therefore, is to develop an organization chart which establishes the basic anatomy of the new organization. The usual rules of organization charting should be followed here.

In this connection, it is of interest to note that recent research in business dynamics has shown that every organization has a characteristic pattern of skills and abilities. For example, small companies are frequently dominated by the overriding personality of a founder or president. More often than not, such energetic leaders create a management vacuum under them. This type of company becomes a likely candidate for merger or consolidation upon the death or pending retirement of its founder. When two companies of this kind merge, the resulting organizational problems are very different from those arising when one such company is assimilated into the family of a well-established large organization. In the former case, the personnel problems may extend far beyond the selection of a single new leader.

Personnel needs and requirements have a way of changing both in degree and in kind when a business reaches a certain size and a certain age. It is precisely at such a stage in a company's history that it becomes a potential candidate for merger. While

exact measurements of this stage have not been developed, it generally occurs when (a) the founding genius ages or runs out of steam; (b) growth creates problems (financial or otherwise) beyond the capacity or willingness of the leaders to handle; (c) one generation of ownership ends and another takes over; or (d) previously successful products are threatened by obsolescence or patent expirations.

Though there are many other roads leading to mergers, this list of possibilities underscores the important part which personnel problems are likely to play in the new organization.

Closely allied with these problems of organizational structure are such questions as:

How much local authority shall be created in the new organization? This is important, because organizations which enjoyed maximum local authority may react aggressively against centralized control after merger. On the other hand, organizations previously subject to central control may appear sluggish if granted greater authority after consolidation.

What control reports and devices are needed, and how do these differ from those previously in use?

Answers to these and other similar questions must be developed before the other personnel controls can be installed.

2. Job Descriptions

Once the consolidated organization chart is drawn up, job descriptions for all positions should be written.

Aside from their obvious uses in an established organization, job descriptions are of special service to the newly merged or consolidated company in untangling many organizational problems and in helping to deploy the available manpower with maximum effectiveness. As an aid to the installation of a consistent compensation program and in pointing up training requirements, their value need hardly be stressed. Job descriptions also assist the new management in learning the functions and operations of each department and in determining where new lines of authority and responsibility may need to be drawn.

3. The Compensation System

It is highly unlikely that the merging companies will have similar compensation plans, policies, and contracts. Hence, existing salary scales and obligations should be carefully studied and compared with those of similar firms. Where discrepancies exist, sound judgment must be applied with consistency and fairness to everyone concerned. It is not unusual, for example, to find that the assimilated company has had more liberal compensation policies than the acquiring organization. Such differences, if ignored, can cause friction.

Suspicion and tension quickly develop among employees when salary cuts or changes in promotional sequence are rumored. The strained human relations that develop during a merger must be handled carefully, and sound rules of salary administration followed.

4. Staffing New Positions

Once the organization chart has been drawn up, a set of job descriptions has been developed, and a consistent compensation program has been

installed, the consolidated organization is in a position to tackle the problem of staffing newly created positions.

Despite the advances that have been made in recent years in the techniques of personnel selection and placement, staffing a consolidated organization presents some unique difficulties which may require new solutions. In a normal situation, for example, a single employee is inserted into an already existing group culture. After mergers, however, the group culture may be entirely new or have vestiges of the former organizations. Another difficulty is that deals assuring the position of certain employees are frequently made as a part of the merger agreement. And, in any event, it always takes time for a new team to shake down and reach normal efficiency.

As has already been pointed out, when two companies combine into a single unit, selection problems are greater than when the merged company is made a subdivision of a larger organization. In the latter case, certain employees can be promoted into the acquiring organization and the blending of personnel can take place more easily.

5. Policies and Procedures in Specialized Areas

Other policies may have to be analyzed. For example, in the field of labor relations a number of problems are likely to arise from such circumstances as:

a. The existence of different unions in each organization, necessitating a change in union relations after merger.
b. Differences in contractual commitments between the two companies.
c. Disparities in wage rates and other items subject to bargaining.
d. Differences in work pace, methods of pay, etc.
e. Contrasting philosophies of dealing with labor organizations.

If the new organization fails to create workable labor relations, policies, and procedures—or fails to install them gracefully and efficiently—real pressures will rapidly develop.

Among other personnel problems which should be investigated are:

Group insurance. By using the combined employee groups as a base, for example, it is frequently possible to reduce retention costs or otherwise improve insurance funding.

Pension obligations. Where these obligations exist, a consolidated analysis should be made to determine possibilities for improved handling of the program.

Other areas. Attention should also be given to existing policies and practices as regard vacations, leaves of absence, personnel records, safety practices, sick leave plans, profit sharing, employee stock-purchase programs, employee-activity programs, etc.

6. Training

Not until the foregoing audit has been completed, and the appropriate policies established, can training needs be identified. As many critics of industrial training programs have pointed out, much of industry's investment in this area is wasted on the wrong kind of training or in training the wrong men. The procedures outlined here should help to determine what training is required and to whom it should be given.

This article has aimed at no more

than an outline of the successive stages in which the personnel problems presented by a corporate merger should be tackled. In the author's opinion, if this pattern is followed, most of the human relations problems associated with consolidations and mergers can be solved on reasonably satisfactory terms. It remains, perhaps, only to be emphasized that no attempt has been made here to indicate *how* each particular stage should be handled. The selection of the specific techniques and methods best calculated to insure the harmonious and profitable operation of the new organization must inevitably rest upon the wisdom, judgment, and experience of those who are called upon to meet the exigencies of the situation at hand.

. . . Despite some built-in disadvantages, job posting—in this company's experience—can pay off in a number of unexpected ways.

Pros and Cons of Job Posting

HENRY G. PEARSON

Personnel Manager
Polaroid Corporation

THOUGH THE SYSTEM of posting job openings on bulletin boards is not without its headaches, it has some incontrovertible assets. At Polaroid, we post job openings up to the $10,000 level and succeed in filling 50 per cent from within the company. Apart from affording a working mechanism for the policy of "promotion from within," the system has produced some other—and entirely unexpected—benefits.

Many companies, no doubt, have shied away from job posting because it entails some fairly obvious disadvantages. To begin with, it's a time-consuming process. Applicants must be interviewed by the personnel department and then by the supervisor in whose department the opening occurs. He is apt to ask, "Why do I have to spend time screening applicants from within the company when I can be pretty sure none of them will

qualify? Why can't I start seeing outside applicants at once?" Moreover, when someone from within the company is selected, *his* boss is likely to balk with, "Well, I'm not going to let him go until I get someone to replace him." So the arrival of the new man has to await the arrival of his replacement, which involves another job posting with its contingent delays.

Many people feel also that the posting of jobs places the supervisor in an embarrassing position. If the opening is the result of the supervisor's decision to replace a member of his group, he will have considerable explaining to do before he actually selects the replacement. He will be asked questions which he may feel are no one's business but his own. It would be easier for him to wait until he can announce the new man's name. Then, if there are any questions, he can simply say, "Well, it's my decision and it's done, so there's no point in discussing it further."

Finally, a typical beef from the rank and file may be, "Joe had that job all sewed up to start with."

These disadvantages are inherent in job posting. Some of them, however, can be licked by explanation and education. Here are answers to three of the objections raised above:

1. An employee who bids and is accepted for a job must be regarded as though he had given notice to resign. His boss should be prepared to release him within, say, two weeks. If no replacement has been found by then, the department will be no worse off than if he had actually quit.

2. There is no reason why the supervisor should feel embarrassed. If one of his people is doing such an unsatisfactory job that he has to be replaced, he must be told so, well in advance of a replacement showing up. Once this unpleasant news has been broken, the supervisor can determine the timing of the posting.

3. The employee who beefs about the system being rigged would probably feel the same way about the selection had there been no system. Job posting cannot eliminate all the squawks about the person promoted; but it does afford a means whereby every interested employee can raise his hand for a hearing.

The Job-Posting Procedure

We have 1,200 employees at Polaroid, and since we have no collective bargaining unit job posting is a straight, company-wide personnel policy. The procedure starts with the supervisor's filling out a requisition form. As soon as the requisition hits the Personnel Department, a brief job description is posted on all bulletin boards. The kind of information given may be seen from the accompanying exhibit.

Unless the opening is in their own immediate section, the applicants usually report first to Personnel. If an applicant is found to be qualified, arrangements are made for him to be interviewed by the supervisor who has the opening. Before the candidate leaves, the personnel interviewer asks him, "Have you talked to your own boss about this yet?" If the answer is, "No," then the interviewer requests him to do so at once.

Final selection is made by the requisitioning supervisor and Personnel. Ability is the paramount consideration; and, naturally, what the em-

JOB POSTINGS

JOB CODE NO.	JOB DESCRIPTION	WORKING SCHEDULE	JOB RATE
283	LUBRICATION MECHANIC (Req 567) Checks for lubrication and lubricates, according to schedule, the moving parts or wearing surfaces of mechanical equipment. Cleans machines and equipment. Reports defective parts of equipment such as worn belts, worn bearings, loose flywheel, etc. Makes recommendations for safety measures concerning equipment on which he works. Makes simple bearing replacements. Checks motor bearing spacing, works to fit into production schedule. Makes recommendations for change in frequency or type of lubrication. Supv: J. Lunt, Preventative Maintenance. Should have good mechanical sense. Knowledge of lubricating procedure essential.	6:00 a.m. 2:30 p.m.	1.70
252	ESTIMATOR (Req 622) Estimates cost on all jobs in Machine Shop. Sets up and maintains records on all estimates. Checks prints with Engineers for cost saving methods. Procures and evaluates estimates for work to be done on breakdown orders by other departments. Sets up and maintains records on drawing changes. Sets up and maintains method for checking actual costs against estimated costs. Supv: R. Wilkins, Machine Shop. High School or equivalent - 2 years in practical machine shop experience or mechanical estimating experience. (Must be good at figures and have neat hand writing.) Ability to learn and maintain good office procedures.		420/mo Group 15
253	Q.C. TESTER (Req 457) To conduct special tests, evaluate data and write reports. Supv: G. Thibeault, Quality Control. Q.C. experience helpful - should be able to write reports clearly and easily. This is a summer job.	8:00-4:45	1.60

It is our general policy to fill job openings from within the company when there are qualified candidates among our own people. If you are interested in any of the above jobs, please tell your supervisor or contact Personnel *immediately*. Jobs will be posted for three days before being filled. Occasional exceptions may be made when particular speed is necessary in filling the vacancy, and recent postings of similar jobs have brought no response. The details of how the Job Posting System operates are contained in Personnel Instructions 53-12 which your Supervisor can show you.

POSTING DATE: 7/10/56

ployee's own boss has to say in his favor is an all-important factor. It is understood that, if the move is going to result in a promotion, the applicant's supervisor has no right to stand in his way. But if it is merely a matter of a lateral move, he may object to such a transfer at this particular time.

When there are no applicants from inside who qualify, then the usual procedures are set in motion for hiring from the outside.

After someone has been selected or hired, but before any announcement is made, the disappointed candidates are notified personally by the requisitioning supervisor. He is usually in the best position to speak authoritatively about the decision.

Some Unexpected Benefits

The immediate benefits of this system of filling openings by promotion from within are patent and hardly require elaboration. Our experience has been, however, that some quite unexpected advantages have emerged.

In the first place, the interviews themselves are not simply routine employment interviews. The candidate is not just an applicant from the outside who knows little about the company and can be dismissed from one's thoughts after he has been turned down. Instead, he is your own employee. In the light of what he knows about the company, he will be listening pretty carefully to what you have to say. If he's not selected himself, he will still be around to see what kind of selection you made—and maybe to ask why he wasn't picked.

The interviews inevitably raise some questions which the employee has the right to ask and the company has an obligation to answer. Quite often, for instance, the rejected applicant is told he is not yet ready for this type of job. Then, he is apt to ask what he should do to make himself eligible for this kind of job in the future. It is up to management to tell him.

At this point, both his own supervisor and the supervisor to whom he applied can help. If poor performance on his present job is holding him back, his own boss can give him advice. If he needs more training, then the supervisor with the job opening can explain the kind of preparation necessary.

Here it should be emphasized that while job posting thus spurs the company and the employee into discussing his long-range objectives, it is not in itself a substitute for training or development programs. Nevertheless, it is a key mechanism in stimulating and implementing such programs.

Sometimes, it happens that a man must be turned down because he has set his sights far too high. This opens the way to suggesting that he apply for a job for which his experience to date better suits him.

Another situation arises in the case of the applicant who puts in for a job, not because he wants this particular position, but because he is dissatisfied with his present spot and is just looking around for something else. Or perhaps he has the idea that he'll never get ahead in his own section because of his supervisor.

Here is an opportunity for the personnel interviewer to clarify the applicant's often vague ideas about what's wrong with his present job or boss. By the end of the interview, the em-

ployee may have decided to go back to his own supervisor and ask him outright, "Why can't I get ahead?" What better opening is there for the alert supervisor to discuss an employee's performance and progress?

Such interviews are, of course, no substitute for the regularly scheduled appraisal interview. But they can be quite as effective because the employee has raised the issue himself and will be tuned in to what his boss says.

Job posting thus automatically creates a variety of natural opportunities for the employee to ask questions about himself, his job, and his future, and for the company to answer them. *Opportunities* for such talks between employee and supervisor are keystones of good communications.

Other By-Products

Finally, it has been our experience that job posting results in some other profitable by-products. For example, our system frequently turns up candidates whom no one would have dreamed to be qualified for or interested in the opening. We had a stenographer who applied and was selected for the job of laboratory technician, a maintenance mechanic who proved eligible for the position of shop estimator, and so on.

Then again, people *read* the notices. Thus the traditionally ignored bulletin board becomes a useful communicator.

Also, because a brief description has to be publicized, the supervisor and Personnel keep asking, "Does this description really describe the job?" In this way, job descriptions are frequently subjected to review.

Finally, employees who read a posting tell their friends outside about it. An outside applicant referred to the company by an employee is likely to be a better-than-average prospect and he comes in with a specific opening in mind. Hence, the whole employment process benefits.

In short, job posting dramatically implements the much-touted but little-practiced personnel principle—*tell them in advance what's going to happen;* and the familiar policy statement in the employee handbook, "We believe in giving our people every opportunity to advance within the organization," now comes to mean business.

Jury Duty—A Survey of Company Practices

THOUGH THE DEMAND for time off with pay for employees called to jury duty is making its appearance with increasing frequency at the bargaining table, few companies seem to have wholeheartedly endorsed this policy, according to a recent survey by the Associated Industries of Cleveland. Of 290 companies in the Greater Cleveland area—generally considered to be representative of U.S. industry as a whole—only 15 provide time off for jury duty with full pay. Eighty-six companies pay their hourly employees the difference between their regular earnings and juror's pay, and 188 grant time off without pay. Where time off is given without pay, most companies permit employees to work another shift, if they request it.

. . . Psychological tests and other formal screening methods offer no short cut to the problem of finding the right man for the job—nor are they tools for the amateur. But, used with caution, they can help in arriving at better selection decisions.

Uses and Misuses of Tests in Selecting Key Personnel

HERBERT H. MEYER and JOSEPH M. BERTOTTI

Public and Employee Relations Research Service
The General Electric Company

DURING THE PAST FEW YEARS, we have seen a growing interest in the use of more systematic methods for the selection and placement of key personnel in business and industry. Many managers are beginning to feel that, since the systematic approach has contributed so much to the success of other business functions, perhaps it can also be applied to the solution of critical personnel problems.

Throughout industry, increasing attention is now being given to the use of such systematic methods of selection and placement as (1) carefully patterned interviews; (2) thorough reference checks and investigations; and (3) objective psychological tests designed to measure certain abilities and interests.

Practices among companies in this respect vary considerably, however. Some have established procedures for carefully screening *all candidates* considered for employment or promotion, including a complete analysis by a trained evaluator. Others have made little or no use of such techniques, preferring to rely on their own historical methods of evaluation and selection.

As is usual with every innovation, there has been considerable misunderstanding regarding the use of these new selection methods, not only among those responsible for making the selections, but also on the part of the people who have been asked to undergo the evaluation procedure. This paper will deal with some of the

NOTE: This article has been adapted from an advisory report originally prepared for General Electric Company operating managers. To meet the needs of that audience, the authors have used some technical terms in their more general or popular sense.

major questions that have arisen in this area.

As part of a systematic personnel evaluation procedure, candidates for managerial and other key positions in industry are sometimes asked to take a battery of psychological tests. The use of such tests has probably been accompanied by more questions and misunderstandings than has happened in the case of any other selection tool. While in the eyes of the professional evaluator a candidate's test results may be a relatively minor part of the appraisal, the candidate himself may very well regard the tests as the most critical and decisive part of the evaluation.

Most of us associate tests with our school days, where they are usually a "pass or fail" matter. Consequently, we are likely to be apprehensive about taking tests, since we are apt to feel that our futures will be decided largely by our performance on the tests, regardless of assurances to the contrary.

Psychological Tests as a Selection Tool

Because of these questions and possible misunderstandings, certain facts regarding the application of psychological tests should be made clear.

1. *What is a test?* A psychological test may be considered as *a sample of performance taken under standardized conditions.* As a general rule, this sample is very carefully selected to be *representative of a broad area of performance.* This is a very important point, for the criticism often leveled at tests is that they don't measure practical performance. We sometimes hear the complaint, "What difference does it make whether or not a man can solve some simple paper-and-pencil problems? He doesn't have to do anything like that on the job." True enough; but years of experimentation have shown that the ability to solve these paper-and-pencil problems is definitely related to the ability to perform certain practical tasks.

The word "standardized" in our definition also deserves emphasis. A psychological test presents a series of tasks to be performed under uniform conditions by each candidate. Thus we can directly compare the performance of any one candidate with that of others. This is one of the main advantages of a test, since "standardized conditions" do not hold for the interview, performance appraisals, or other means of evaluation.

2. *What can tests measure?* Research studies indicate that tests are of most value in measuring certain *abilities* or *aptitudes.* The most widely used tests for screening candidates for higher-level positions are those designed to measure "general intelligence" or general learning ability. Studies have shown that it is very difficult to judge intellectual capacity or "ability to learn" on the basis of an interview—or even on the basis of observed job performance. Yet basic intellectual capacity is essential to success in a complex, higher-level job assignment.

Years of experimentation confirm that the intellectual tasks in a "general ability" test are predictive of certain aspects of practical performance. In other words, persons who

score high on general ability tests generally have the *capacity* to use good judgment, to think ahead, and to make wise decisions quickly in a variety of situations—all the activities generally thought to require "intelligence."

Tests can also provide a fairly accurate measure of other abilities of importance for specific jobs, such as the ability to understand mechanical concepts, to visualize objects in space, or to work with figures or facts. All these qualities are difficult to assess accurately by means of an interview or other selection tools.

3. *Personality and interest tests.* Tests are also used quite often to measure interests and personality characteristics. In these areas, considerable caution must be exercised, however, in interpreting test results. While interests and "personality" are usually important factors in determining job success, psychologists have not been so successful in developing valid measures of them as they have been in developing measures of abilities.

A diagrammatic representation of the degree of accuracy with which different human characteristics can be measured is shown in the accompanying exhibit. As may be seen, certain physical characteristics can be measured with a *high*, and abilities, aptitudes, and skills with a *fair*, degree of confidence; interest measures are less accurate, while personality traits are at the bottom of the scale.

One reason why personality tests often fail to provide valid predictions is probably that personality "traits" themselves are not always highly consistent. Our personalities vary somewhat with the situations in which we are placed. We are all "retiring" in some situations and "aggressive" in others. We may show great "perseverance" in one kind of activity and very little in another.

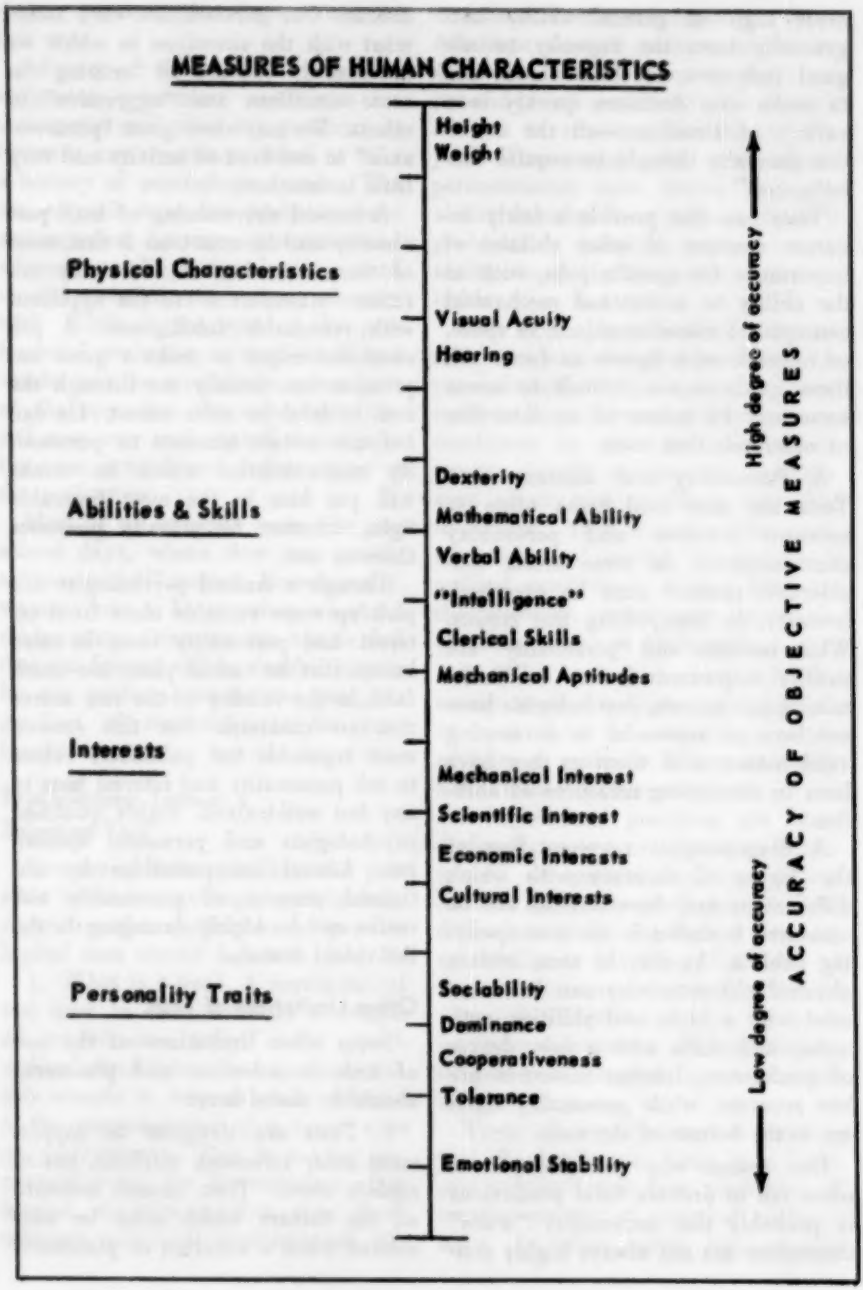
A second shortcoming of both personality and interest tests is that most of those that are in use today are rather "transparent" to the applicant with reasonable intelligence. A job candidate eager to make a good impression can usually see through the test, at least to some extent. He can indicate certain interests or personality characteristics which he thinks will put him in the most favorable light, whether he actually possesses them or not.

Though a trained psychologist can pick up some valuable clues from interest and personality tests, he also knows that he cannot place too much faith in the validity of the raw scores that are obtained. For this reason, most reputable test publishers refuse to sell personality and interest tests to any but well-trained, highly qualified psychologists and personnel specialists. Literal interpretations by untrained persons of personality test scores can be highly damaging to the individual tested.

Other Limitations of Tests

Some other limitations of the use of tests in selection and placement should be noted here:

1. *Tests are designed to supplement other screening methods, not to replace them.* Tests cannot measure all the factors which must be considered when a selection or placement


MEASURES OF HUMAN CHARACTERISTICS
Physical Characteristics
Abilities & Skills
Interests
Personality Traits
Height
Weight
Visual Acuity
Hearing
Dexterity
Mathematical Ability
Verbal Ability
"Intelligence"
Clerical Skills
Mechanical Aptitudes
Mechanical Interest
Scientific Interest
Economic Interests
Cultural Interests
Sociability
Dominance
Cooperativeness
Tolerance
Emotional Stability
High degree of accuracy
Low degree of accuracy
ACCURACY OF OBJECTIVE MEASURES

decision is made. There are many important qualifications which can be evaluated only on the basis of past performance, or from the candidate's education, special training, or demonstrated interests.

Even in the matter of abilities, tests indicate only what a man should be able to do—they cannot measure what he *will* do. This point cannot be emphasized too strongly. However much ability an individual possesses, it is of little value to him if, for some reason, he is incapable of applying it to the performance of his job. Even a top score on an "intelligence" test, for example, will not compensate for lack of drive.

2. *Test scores have a relatively high margin of error.* A further limitation arising from the use of tests is the natural tendency to accept the numerical scores obtained as precise and exact measures. We are all accustomed to dealing with physical measures where the margin of error is insignificant. If a table measures, say, 36 inches in length, for all practical purposes we can accept its length as 36 inches. With a psychological test, on the other hand, a score of 36 may mean a true score of something between 30 and 40. Hence, small differences in scores between candidates are relatively meaningless.

3. *Tests alone are inaccurate predictors of job success.* Even more important is the fact that test results are still less accurate in *predicting* the behavior they are designed to sample. A test may provide a reasonably accurate measure of mechanical aptitude, for example, but its accuracy as a predictor of success in a mechanical job may be relatively low. It is much like the problem of predicting weather from a barometric reading. The barometer may provide an accurate measure of air pressure, but a prediction of future weather conditions based solely on this measure of air pressure may be relatively unreliable.

Let's carry this analogy a step further. While the barometer is not a highly accurate predictor of weather, with it we can do a better job of weather forecasting than without it. The same principle applies in the use of tests for predicting job success, *provided the characteristics tested are required in the job.*

This warning deserves special emphasis. Obvious though this principle may seem, tests are often used without sufficient attention being paid to specific job requirements. Unless we have an accurate "Man Specification" for the position to be filled, even the most reliable appraisal tools will be of little value in predicting success on the job.

A common error along this line is to assume that the higher the score on any test the better the chances for success on any job. In some jobs, precisely the opposite holds true. Thus, persons who score high on intelligence tests often make a poor adjustment to relatively routine work. Even in screening college graduates, we sometimes find that a high test score is the clue to a liability. A very high intelligence test score, accompanied by a mediocre record of achievement, for example, may indicate that the applicant is lazy, has poor work habits, or possesses person-

ality problems which interfere with his efficiency. This clue we would try to verify, of course, in the interview or through reference checks.

In one research study of tests for selecting supervisors,* the applicants who scored either very low *or* very high on a test of "supervisory judgment" were found to be the poorer performers in supervisory jobs. In this case, the research study showed that applicants scoring in the middle range on this particular test were the best bets, even though the test seemed to be measuring desirable supervisory knowledge—or at least the "right" supervisory attitudes.

Practices to Be Followed in Using Professional Evaluations

While it is important to recognize the limitations enumerated above, experience has shown that the proper use of tests and related professional evaluation services can enable a manager to make wiser selection and placement decisions than he can make without the aid of these tools. Experience has also shown, however, that the use of these evaluation tools of the professional should be accompanied by:

1. *Accurate "man specifications" for the positions for which candidates are evaluated.* We cannot hit the bull's eye if we have not clearly defined the target. Appraisal information does not have general validity. It has value only for predicting success in specific situations. The same ability or trait may be an asset in one position and a liability in another. Hence, the specific key requirements for success on the job should be spelled out, and the evaluation results interpreted in the light of these requirements. Measures of little or no value in determining performance on the job should be ignored.

2. *Past performance records and other background appraisal information.* Test results should be presented as a *supplement* to these other appraisal sources, in order to insure that test findings are not given undue weight in arriving at personnel selection or placement decisions.

3. *Strictly confidential handling of test results and other evaluative information.* Appraisal findings passed on indiscriminately can easily be misinterpreted or misused and might be highly damaging to the reputation of the individual involved. All such information should be treated as strictly confidential.

Particular care should be used in passing on an evaluation for a specific job opening, when the same man subsequently becomes a candidate for another job. Negative findings on a candidate for a highly technical position, for example, may not apply at all to the same man when he is being considered for a managerial position.

4. *Careful selection of outside consultants.* More and more companies are turning to outside experts for help in arriving at difficult selection decisions. Unfortunately, while many of the firms offering evaluation services are staffed by reputable professionals who use well-proven techniques, there are also a few "operators" in this field who often do a more effective selling job than their better-qualified

* "An Evaluation of the G.E. Supervisory Selection Program," unpublished report for General Electric Company Management, 1954.

competitors. Particularly open to suspicion are all alleged panaceas, and the practitioner who makes extravagant claims for the validity of his techniques. There are no magic answers to this difficult problem of appraising human potentialities.

Unless the manager has a trained person on his staff to interpret test findings properly, he would be well advised to select a consulting firm whose evaluations are based on something more than *tests alone.* A great deal of importance is likely to be attached to the expert's findings. *If the expert uses tests alone, he cannot provide a complete and accurate picture of an individual's potentialities.* The manager should be especially cautious about consultants who claim to be able to pick people without even seeing them.

5. *Cautious interpretation of "personality" test findings.* As has been pointed out, personality tests have generally proved to be less valid than tests of abilities or aptitudes. On the other hand, *if we accept "testimonial" evidence, personality tests seem to be very valid.* This is because personality traits are so nebulous that almost any pattern of findings will seem to fit a candidate very well. In other words, we tend to see in a candidate the traits which the test results say are there. If test results inaccurately point up personal liabilities, the reputation of the individual involved might be unjustly damaged.

In any case, even if we could measure personality traits accurately, we do not know what constitutes the ideal "personality" for an accountant, a salesman, a lawyer, a manager, or even a company president. Research studies have shown that men with entirely different personalities have often been successful in the same positions.

6. *Avoidance of emergency evaluations.* All too often, an employee has little or no experience with tests until some emergency arises and a personnel change which would affect him must be made. Perhaps his department is being reorganized, or a specific promotional opportunity arises. If, at this time, he is asked to undergo a formal "evaluation," it is difficult to convince him that his future status will not be decided on the basis of the "evaluation" results alone. Such "emergency" evaluations often give rise to complaints, especially by long-service employees. They may feel that more weight will be given to the test results than to their record of performance.

Some companies have followed the practice of conducting a complete audit of the abilities and other qualifications of all managers and key specialists as part of their regular "Personnel Development" program. The primary purpose of such evaluations is to aid each individual evaluated in planning his own self-development. When subsequent promotional or transfer opportunities arise, the evaluation data can also aid his superior to place him where he can capitalize on his strengths.

7. *Careful explanation of the program.* Each individual to be tested or otherwise appraised by the "expert" should be given a thorough explanation of the program, the part which the tests or professional evaluation

will play in arriving at personnel decisions, and the potential value of the program to him personally.

In fact, when formal appraisal procedures are used to any extent within a department, it is well to *provide an explanation of the program to all persons who might be involved.* This will help to prevent the misunderstandings which are now prevalent in many companies regarding the use of such tools.

The important part played by other sources of appraisal information should also be stressed. It is especially damaging to the reputation of the testing program if test results are used as the "scapegoat" when the manager has the undesirable task of explaining to an unsuccessful candidate why he did not qualify for a particular assignment.

8. *Feedback of evaluation findings.* Provision should be made for the results of an evaluation to be communicated to the candidate. Failure to report back often causes unnecessary apprehension about the implications of the findings.

Though every person who takes tests or is subjected to a professional appraisal can *benefit from the findings* if they are presented to him properly, it is well to recognize, however, that this feedback of appraisal results is not easy. If poorly handled, it can do more harm than good. In some companies where professional consulting firms are extensively used for executive appraisals, the same consultants are employed to perform the additional counseling service of discussing each man's appraisal results with him. In other companies, personnel department specialists provide operating managers with the materials and training necessary to perform this feedback task properly.

Raising Our Batting Average

Though tests may appear to offer an easier and quicker way of making selection and placement decisions, unfortunately this is not the case. Properly employed, tests do not provide a short cut. In fact, with the adoption of more thorough and systematic methods in the evaluation program, the manager may very well find that he *spends more time* on personnel decisions.

Furthermore, the use of tests does not necessarily make selection decisions any more clear-cut and automatic. *Tests cannot be used as a substitute for good judgment.* Actually, the additional information provided by tests will sometimes make the selection decision more difficult. However, though the use of tests may necessitate more discerning judgment, the additional information they provide should also make our judgments more accurate.

Finally, it should be emphasized that the use of more systematic procedures for evaluating human characteristics will not result in perfect predictions of human performance. Even if our measures were perfect—which they are not—human behavior is not consistent enough to enable perfect predictions to be made. Despite the aid of the most advanced procedures, we shall continue to make some mistakes. The important point is: Do we make fewer mistakes when objective and systematic methods are applied?

The GE research study previously referred to showed that supervisors selected on the basis of the "expert's" evaluation, in conjunction with management's own appraisal of potential, were about four times less likely to be rated "poor" in subsequent job performance than were a comparable group of supervisors selected without recourse to the evaluation of an expert.

On the findings of this study, we may conclude, therefore, that the use of more thorough and objective methods should raise our batting average and so help to achieve a better qualified management team.

Bearing in mind that the misuse of tests can set us back materially in the progress made in this field thus far, we can consolidate our gains by taking every precaution in the use of the formal or systematic screening tools discussed in this paper. On this foundation we can continue to develop still better methods for insuring that each individual is placed in the job for which he is well qualified and in which he can make the maximum contribution to his company's success.

Job Performance of Older Workers

ARE OLDER WORKERS actually less efficient than younger ones? Despite the dearth of factual information on the relationship between age and job performance, the belief that efficiency declines with increasing age is widely held and constitutes a major barrier to the employment of older workers in industry.

In a recent bulletin, *Job Performance and Age: A Study in Measurement*, the Department of Labor reports the results of an investigation designed to test the performance of older workers from actual plant records and to develop techniques for measuring the relationship between age and job performance. Though the findings are not conclusive—the study was limited to eight manufacturing establishments in two industries, footwear and men's clothing, and was intended primarily as a pilot study—they go some distance toward dispelling current notions about older workers.

It was found, for example, that output per man-hour, one of the four indicators of work performance defined in the study, remained fairly constant through the age of 54, with some falling off in the average for the 55-64 age group. However, differences in the output of persons in the *same* age group were greater than differences in average output *between* groups—in other words, many workers aged 55-64 maintained higher output than the average for younger groups. With respect to attendance, only small differences were found among the various age groups. Data on separations revealed on the whole a higher rate of quits and discharges among workers under 25, but the coverage was too limited to permit significant differences among age groups to be identified.

Feature Section

Industrial Relations Research At Universities

Progress Report, 1955-1956: Part II

Current studies in industrial relations and personnel administration at universities throughout the country are producing some highly significant findings of practical interest to personnel and labor relations executives. Part I of this year's report on these studies appeared in the September issue of PERSONNEL. *Here is the concluding section of the report.*

UNIVERSITY OF MINNESOTA
INDUSTRIAL RELATIONS CENTER
Dale Yoder, Director

Work in Progress

Current studies in the Industrial Relations Center are organized around the programs of the Center's six laboratories:

Triple Audit and Basic Research

1. *Employee Attitude Survey*, by Herbert G. Heneman, Jr. and Thelma A. Kunde. Data on employee attitudes obtained from a large number of United States firms are being related to the personnel policies and practices reported by these firms. The purpose of this study is to determine what relationship exists between high or low morale and certain personnel policies and practices. This study is a part of the continuing search for patterns of relationships between elements of policy and practice on the one hand, and selected goal factors on the other.

2. *Economic Yardsticks*, by Herbert G. Heneman, Jr. and Thelma A. Kunde. Data secured from a nntionwide sample of manufacturing firms are being tabulated and analyzed to discover the most common method of measuring absenteeism. Similar studies of other economic yardsticks are also planned.

3. *Matrix Analysis*, by Herbert G. Heneman, Jr., Thelma A. Kunde, Karl Collins, and Russell Cunningham. The purpose of this study is to determine the relationships between industrial relations policies and practices (contributing factors) and industrial relations goal factors (yardsticks). Fifty manufacturing firms in the Minneapolis-St. Paul metropolitan area are providing data on policies and practices in communications, administration of employee

benefits and services, recruitment and selection, training and induction, wage and salary administration, and other areas. Yardsticks will include, among others, turnover, accidents, absenteeism, and morale. Relationships between yardsticks and contributing factors will be evaluated by matrix-type analyses.

Professional Standards

1. *Salaries and Ratios in Industrial Relations*, by Dale Yoder and Roberta J. Nelson. In January, 1957, the Industrial Relations Center will conduct its tenth annual survey of personnel ratios and of the salaries of personnel and industrial relations executives. As in previous years, this survey will include information on the education, experience, and personal qualifications of men holding top industrial relations positions. The findings of the 1956 survey were reported in the July issue of PERSONNEL.

2. *Functions and Budgets of Employee Relations Departments*, by Dale Yoder and Roberta J. Nelson. An annual survey, begun in 1952, of how industrial relations departments allocate money and staff time to 14 major personnel and labor relations functions. Expenditures and personnel ratios for each of the 14 functions are analyzed on a year-to-year, inter-industry, and inter-firm basis. During the first four years of the study, average "dollars per employee" spent for personnel and labor relations programs increased from $48.59 to $71.47. These continuing studies seek to provide some significant yardsticks for personnel executives interested in comparing their own departmental costs and staff requirements with those of similar organizations.

3. *Jobs in Industrial Relations*, by Dale Yoder, Roberta J. Nelson, and Richard G. Woods. This study will constitute a revision of an earlier study under the same title (*IRC Bulletin 3*, 1947) and will seek to provide accurate, up-to-date descriptions of duties and requirements of representative jobs in industrial relations. Information has been collected from persons now holding such jobs in companies, unions, and government agencies. Analysis of this information will provide generalized job descriptions for all major staff jobs in employee relations.

4. *The Industrial Relations Five-Foot Shelf*, by Herbert G. Heneman, Jr., Georgianna Herman, and Roberta J. Nelson. A revised edition of an earlier publication under the same title (*IRC Bulletin 5*, 1947) is being prepared and will present as stated in the preface to the first edition, "a carefully selected list of basic references which, taken as a unit, should be a *minimum* library for the general practitioner in this field." The rapidly growing literature of industrial relations has made it necessary to develop this revised edition in three sections: (1) Manpower management, including personnel and labor relations; (2) union policies and practices; and (3) public policy and intervention in employment relations. Section 1, *The Manpower Management Five-Foot Shelf*, will be published late in 1956 by the University of Minnesota Press as *IRC Bulletin 19*.

Management Development

1. *Analysis and Classification of Management Jobs*, by Thomas A. Mahoney, Herbert G. Heneman, Jr., and Thomas Jerdee. The aim of this study is to determine the responsibilities and duties of management jobs, as a basis for the better selection, assignment, development, and compensation of managers. Management positions are being analyzed in terms of the time spent in performing various functions and the relative importance of each function to over-all success on the job. These job descriptions are being further analyzed and compared to determine whether or not job families can be established.

2. *Predictors of Management Potential*, by Thomas A. Mahoney, George W. England, and Ann Jarvis. This study seeks to identify the personal characteristics of successful managers which can be of value in predicting potential management ability. These characteristics (as determined from psychological test scores, personal history, etc.) are being analyzed to discover possible patterns in different jobs, industries, and firms and to afford comparisons with performance evaluations.

3. *Management Compensation Policies and Practices*, by Thomas A. Mahoney and John Anderson. The purpose of this study is to identify the factors —job, industry, company, and personal—which account for variations in the amount and the method of management compensation and to determine the relationships between these factors and the compensation system. Intensive case studies as well as more extensive survey data will be used.

Labor Marketing

Family as an Influence in Labor Force Behavior, by Thomas A. Mahoney, Herbert G. Heneman, Jr., and Edward Vizard. Current studies focus on discovering and measuring the influence of family economic and social characteristics upon the labor force behavior of family members. An extensive bibliography of hypotheses and research in this area of study has been prepared. One project is under way to investigate variations in family characteristics and labor force behavior in a number of cities. A later study will examine relationships between family characteristics and labor force behavior within a single labor market area.

Union Studies

Union Studies, by Walter H. Uphoff, George W. England, and Thomas Vaaler. Current research in this area seeks to discover relationships between attitudes of union members, participation in union affairs, and union communication programs. Personal characteristics of the respondents will be related to attitudes, participation, and communications.

Labor Relations and Personnel

Vocational Interests of Scientific and Technical Personnel, by Donald G. Paterson, George W. England, and Travis Olson. This study will compare the vocational interests of employed engineers engaged in four types of engineering duties (pure research, design and development, production, and sales or technical service) and development of special scoring keys to aid in counseling engineering students and in placing applicants in appropriate industrial jobs.

COLUMBIA UNIVERSITY

GRADUATE SCHOOL OF BUSINESS

Although there is no formal institute or center of industrial relations at Columbia University, a substantial amount of research in this field has recently been completed or is under way by the group of specialists who are scattered throughout the departments and colleges of the university.

1. Professor James Kuhn is undertaking a comparative study of grievance problems in the rubber and textile industries. This study, which will be based primarily upon field research, is part of a larger project which will examine the development, nature, and effects of collective bargaining at the shop and plant level.

2. Among the continuing studies of the American worker being undertaken by the program on the Conservation of Human Resources is a recently completed study by Professor Henry David, *What Labor Wants from Government*. This offers an interpretation of the way in which labor has sought to fulfill its expectations through employers, state and local governments and the Federal Government. Also in preparation is a monograph, *Women Who Work: 1890-1956*, which will provide an analysis of changes in labor force participation by women; alterations in the occupations and occupational levels at which they work; and regional and city differences in participation rates. Particular attention will be paid to the interplay between demographic and educational changes, and changes in the employability of women.

3. The major effort of the Conservation Project, which is now in its sixth year under the direction of Professor Eli Ginzberg, is still being devoted to *Studies in Personality and Performance*, the first volume of which, *The Lost Divisions: Psychiatry and Manpower Logistics in World War II*, should be ready for the press early in 1957. This volume is concerned with the selection, training, and utilization of military manpower during World War II, with particular emphasis on the factors resulting in ineffective performance. The other two volumes of the series are entitled *Life Histories of Soldiers Who Failed*, and *The Ineffective Soldier: A Summary Report to the Nation*.

4. A Conservation Project volume, *Effecting Change in Large Organizations*, will set out in an exploratory fashion a framework for the systematic understanding of the internal and external factors facilitating or retarding significant changes in the structure of large organizations.

5. Preliminary work has begun on a study, *Patterns of Business Leadership*. This is a follow-up to earlier exploratory work published under the title, *What Makes an Executive*.

6. Closely related in its interests to the Conservation Project is the work of the National Manpower Council, under the direction of Henry David. The Council is currently completing its *Study of Womanpower* on which it has been engaged for almost a year and a half. The report is scheduled to be published by the end of the year. Among the topics to be covered in this volume are: the position of women in the labor force (past and present); their education and training; and work in the life cycle of women. The Council has already begun preliminary work on its next study, which deals with governmental manpower problems and policies. This study should be completed before the close of 1957.

7. Continuing his investigations of influences on labor productivity, Seymour Melman is undertaking a major study to be entitled *Productivity and Decision Making in Production*. This will be based on detailed observation in a multi-plant firm of certain decision-making processes—specifically the role of alternative costs in controlling the selection of production equipment, and the design of methods for determining the proportion of employees required for administrative functions.

A previous inquiry (1950-1954) into industrial productivity disclosed that the ratio of labor to machinery cost has been a controlling factor in determining changes in productivity over time and differences among countries at any one time. A full account of this investigation has been published under the title, *Dynamic Factors in Industrial Productivity*. In his new investigation, Professor Melman will extend its findings by testing the usefulness of the main hypothesis in accounting for the detailed behavior of industrial managements producing comparable products. One of the firms to be studied is in England, the other in the United States. Important sections of this study

will deal with decision making by the union, decision making by management, and the effects of union and management decision making on productivity.

8. Professor Abram Jaffe is working on six problem areas in which research is either actually under way or in the planning stage. These are: (1) labor force participation of women and the birth rate; (2) estimating future supply of selected professional and technical workers in the United States; (3) revised occupational coding systems; (4) labor force and population changes accompanying economic development—a case history of Puerto Rico; (5) measurement of the working force and underemployment in underdeveloped areas; and (6) training of native labor in underdeveloped areas.

9. Professor Neil W. Chamberlain is serving as chairman of the editorial board for the 1957 research volume of the Industrial Relations Research Association, which will be a partial survey of industrial relations research in the postwar period. He is also drafting a manuscript dealing with the role of the board of directors in the large corporation. This will express the views of a small group of top-management people who have been meeting with two representatives of the Graduate School of Business for discussions on that topic. While this project, as well as some of the others reported above, may appear to have only a peripheral concern with labor economics and industrial relations, the general attitude of the Columbia group is that advances in the latter fields can be best made by exploring points of contact and mutual influence with such "peripheral" areas.

10. Professors Aaron Warner, of the Department of Economics, Lawrence B. Cohen, of the Department of Industrial Engineering, and Conrad Arensberg, of the Department of Anthropology, are continuing work on the various projects reported in the September, 1955, issue of PERSONNEL.

HARVARD UNIVERSITY
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
DIVISION OF RESEARCH

Projects Recently Completed

Worker Satisfaction and Development: A Case Study of Work and Social Behavior in a Factory Group, by Professor A. Zaleznik. Based on a field study of a small group of machinists and operators in a manufacturing job shop, this study explores the factors which make for a "well integrated" work group among workers of heterogeneous backgrounds.

Work in Progress

1. *Aptitude Tests and the Performance of Managerial Personnel.* A comparative study by Professor Lewis B. Ward based initially on aptitude, temperament, and interest test scores by members of Harvard's Advanced Management Program from 1947 to 1949 and a group of candidates for the M.B.A. degree. Through systematic follow-up of the two groups during 1953-54, data on current salaries, promotions, community interests, etc., were obtained, which are now being analyzed. The results should be available by the end of the year.

2. *A Study of the Effectiveness of Executive Development Programs.* This five-year program by Professor Kenneth R. Andrews will study the problem of devising measures of the effectiveness of advanced management-training programs sponsored by companies and universities. It is planned to devote alternate terms to this research over the five years in order to follow the

careers of individual men who have had such training and to obtain the maximum help from individual companies who are conducting inquiries of their own. The program will involve the cooperation of other universities offering advanced management programs and of companies that are willing to examine and record in detail their impressions of the effectiveness of this kind of adult education. The research will include extensive interviews with men who have had this form of training as well as interviews with the subordinates, associates, and superiors of a selected sample.

3. *A Case Study of Organizational Change.* A study by Professor Paul R. Lawrence of a medium-sized supermarket chain which is going through an important internal reorganization aimed at shifting several management functions from the home office officials to newly created store managers. The study focuses on (1) management's reasons for making the organizational change; (2) the methods of introducing the change; (3) the process by which individuals shift their organizational roles; and (4) the consequences of the change for the organization.

The field work to date underscores the fact that the supervisory behavior patterns of the district managers who are the immediate superiors of the new store managers are crucial to the reorganization effort. The research methods used will afford an intensive study of the process by which individuals influence, and are influenced by, a change in the formal organization and at the same time furnish a basis for general observations about the problems of effecting an organizational decentralization. At both these levels, the study will contribute, it is hoped, to the long-range research objective of understanding organizational behavior.

4. Work is continuing on the following projects previously reported in PERSONNEL: *The Ability Factor in Employee Status*, by Professor James J. Healy; and the human relations study by Professors Fritz J. Roethlisberger, C. R. Christensen, and A. Zaleznik, in cooperation with Professor George C. Homans, of the Department of Social Relations, and Professors Bailey, Lawrence, Lombard, and Surface, of the Harvard Business School.

PURDUE UNIVERSITY

OCCUPATIONAL RESEARCH CENTER

Joseph Tiffin, C. H. Lawshe, N. C. Kephart, and E. J. McCormick

Testing, Selection, and Training

1. *Human Relations Inventory.* A test has been devised to identify foremen or prospective foremen who are best able to "get along" with people. Directed by Dr. Joseph Tiffin.

2. *Selection of Supervisors and Apprentices.* A series of tests has been validated for the selection of apprentices (in six crafts) and supervisors in an oil refinery. Directed by Dr. E. J. McCormick.

3. *Mechanical Assembly Test.* Two experimental forms of a mechanical assembly test have been constructed and are presently being validated. Directed by Dr. E. J. McCormick.

4. *Purdue Non-Language Adaptability Test.* A relatively language-free test has been developed to assess mental ability. Directed by Dr. C. H. Lawshe.

5. *Revised Purdue Clerical Adaptability Test.* The instruction manual for this test has recently undergone extensive revision to include validity and normative data. Directed by Dr. C. H. Lawshe.

6. *Purdue Reading Test for Industrial Supervisors.* The validity of this test has been determined. Directed by Dr. Joseph Tiffin.

7. *Identification of Management Training Needs.* The utility of the questionnaire method for identifying the training needs of specific management groups in a number of relatively independent training areas has been investigated. Results indicate that these needs can be objectively assessed by this method. Directed by Dr. C. H. Lawshe.

Attitudes and Morale

1. *Indices of Employee Morale.* Preliminary research shows that reliable indices of employee morale can be obtained from the comments written anonymously by employees on opinion survey ballots. Further research is being carried out to determine the most reliable index. This work will not be finished until next year. Directed by Dr. Joseph Tiffin.

2. *Employee Opinion Survey Questions.* Two pools of generalized questions dealing, respectively, with (a) attitude toward the company as a whole, and (b) attitude toward an employee's immediate supervisor, have been tried out in several industrial plants and found to yield reliable scores of departmental morale. Directed by Dr. Joseph Tiffin.

3. *Communication Attitudes of Industrial Foremen.* Production ratings for a number of first-line industrial foremen were found to be related to the foremen's attitudes toward communication with their workers. However, foremen with different ratings did not differ significantly in their attitudes toward their immediate supervisors and toward higher management. Directed by Dr. C. H. Lawshe.

Job Placement and Job Analysis

1. *College Placement Procedures.* This study, currently under way, will combine an historical sketch of a college placement office with a critical analysis of some of its problems. Directed by Professor W. V. Owen.

2. *High School Drop-Outs.* Through use of sampling methods, an attempt is being made in one high school to follow the careers of students who have dropped out. Directed by Professor W. V. Owen.

3. *Synthetic Validity.* Evidence from this study of clerical and office activities indicates that it is possible to determine "synthetically" the test requirements for particular jobs through analysis of small job elements. Further research will be concerned with the determination of test patterns for various combinations of job elements. Directed by Dr. C. H. Lawshe.

4. *Check Lists for Job Analysis.* Occupational checklists of machine shop and motor vehicle maintenance and repair jobs have been completed. Statistical analysis will be made of interrelationships among work elements in order to locate clusters. Findings will not be available until the end of 1956. Directed by Dr. E. J. McCormick.

Other Projects

1. *Economic Analysis of the AFL-CIO Merger.* An analysis of the motivating forces behind the merger and some of its probable consequences. This investigation will be completed by the end of 1956. Directed by Professor W. V. Owen.

2. *Human Engineering.* A study of the general principles of product design is being directed by Dr. N. C. Kephart.

3. *Evaluation of Employees from Recorded Critical Incidents.* Using a

method of recording critical incidents very similar to that developed by Dr. John Flanagan, an attempt is being made in one company to construct employee ratings from incidents recorded. The company plans to use these ratings instead of usual merit ratings. This study will not be completed until the spring of 1957. Directed by Dr. Joseph Tiffin.

Michigan State University

Labor and Industrial Relations Center

Charles C. Killingsworth, Director

Effective January 1, 1956, Michigan State University established a Labor and Industrial Relations Center for the purpose of fostering research and developing and correlating instructional programs—both on campus and off campus—in labor and industrial relations. Charles Killingsworth, Head of the Department of Economics, has been appointed Director of the Center. The three major activities of the Center are headed by Jack Stieber, Associate Director, Research and Planning; Dalton E. McFarland, Associate Director, Personnel Management Program Service; and Fred K. Hoehler, Jr., Associate Director, Labor Program Service.

In almost all cases, the research projects reported below were started before the Center was set up and were conducted by faculty members in the designated departments. The Center hopes to assist in the completion and publication of these projects.

Projects Recently Completed

1. *The Industrial Worker in Pennsylvania 1800-1840*, by William A. Sullivan. This book examines (a) the impact of the industrial revolution on industrial workers; (b) the relationship of Pennsylvania workers to Jacksonian Democracy; and (c) the organization of Pennsylvania workers for political action.

2. *Safety Management: Accident Cost and Control*, by Rollin H. Simonds, Professor of Management, with John V. Grimaldi, General Electric Company.

Work in Progress

1. *Secondary Boycotts and the Taft-Hartley Act.* This study, by Professors Melvin J. Segal and Charles C. Killingsworth, deals with (a) NLRB and court interpretations of secondary boycott provisions of the Taft-Hartley Act; (b) the impact of these provisions on collective bargaining; and (c) the development of a public policy towards secondary boycotts which is consistent with effective collective bargaining.

2. *The International Metalworkers Federation.* A study by Melvin Segal of the Federation and its relationships with United States affiliates.

3. *Role of the Industrial Relations Executive.* Professor Dalton E. McFarland has completed the field work for a pilot study of the role of the top labor relations or personnel executive in relation to (a) other executives above, below, and parallel to him; and (b) the collective-bargaining function of management. The over-all objective is to lay the foundations for a closer integration of management concepts and principles with industrial relations concepts. The project has been assisted by grants from the Michigan State University Research Fund during 1954-1956.

4. *The Industrial Worker in Pennsylvania 1840-1900.* A continuation of

Professor Sullivan's research which will emphasize the development of labor-management relations and trade unions during the period under study.

5. *Steel Industry Wage Structure.* A study by Professor Jack Stieber of the development, impact, and administration of the joint industry-union program to eliminate wage rate inequities in the steel industry. This research has been assisted by the Wertheim Committee for Industrial Relations Research of Harvard University and by the Division of Research of the Harvard Business School.

6. *Industry and the Community.* This forthcoming book by Professor William H. Form and Delbert C. Miller, of the University of Washington, is concerned with the non-economic functions of labor and management in the community. Original case materials will be presented from studies in several American and foreign communities.

7. *Social Aspects of the Local Labor Market.* A study by Professors William H. Form and Sigmund Nosow of the effects of social origin, migration experience, and other social factors on the job placement of manual workers in a Michigan community.

8. *Union Development in the West Indies.* Professor William H. Knowles is completing a monograph on the social, economic, and political background of union development in the British West Indies.

9. *Studies in Automation.* Under the direction of Professor Stieber, a series of pilot studies on the effects of automation on management, the worker, and the community is now in progress.

CARNEGIE INSTITUTE OF TECHNOLOGY

GRADUATE SCHOOL OF INDUSTRIAL ADMINISTRATION

G. L. Bach, Dean

Work in Progress

1. *Management Response to the Union Challenge,* a new project under the direction of John R. Coleman, Associate Professor of Economics, will study changing patterns in managerial actions under union pressure. Varieties of response to outwardly similar pressures are being observed closely in a small group of firms, with particular attention to those functional areas which are deemed by management to be integral to the efficient running of the business. For purposes of this study, the collective bargaining agreement represents a changing body of constraints within which management seeks to exercise its functions, and the question to be answered in each instance is, "To what extent are management's actions felt to be circumscribed by the agreement?" Observation and analysis of the case studies are scheduled for completion in 1957.

2. *The Role and Functions of Intermediate Level Officials of Industrial Unions,* a continuing project of Myron L. Joseph, Associate Professor of Economics. This study is based on direct observation over time of the many contacts between selected staff representatives and the locals which they service. In addition, a sample of field representatives, local union officials, and management spokesmen will be interviewed. Among the central research questions are: (a) What are the major forms of communication and influence between district representatives and their superiors? (b) How and to what extent do these representatives influence the behavior of the local unions in their areas, both in matters of union-company relations and in matters of

union-member contacts? (c) What role do the local unions in turn play in the shaping and execution of district and international policies? Field work will be completed in the spring of 1957 and preparation of the reports will follow thereafter.

3. The following projects, previously reported in PERSONNEL, are still in progress:

Decision-Making in Business Organizations, by Herbert A. Simon, Professor of Administration, R. M. Cyert, Associate Professor of Economics and Industrial Administration, C. J. Haberstroh, Senior Research Fellow in Administration, and William Dill, Assistant Professor of Industrial Administration.

Union Political Activity, by Melvin K. Bers, Assistant Professor of Economics.

CALIFORNIA INSTITUTE OF TECHNOLOGY

INDUSTRIAL RELATIONS SECTION

Robert D. Gray, Director

Projects Recently Completed

Postwar Changes in California Unemployment Insurance Experience, 1946-1950 to 1951-1955. This study, the first publication of the newly established Benefits and Insurance Research Center, summarizes the changes which have occurred in the financial position of the California unemployment insurance program during the postwar decade. These changes, reflecting the growth, development, and diversification of California's economy during that period, include the rise in taxable wages, the decline in the rate of covered unemployment, the decrease in the average annual cost rate, and the improvement in the adequacy of reserves.

Work in Progress

The Industrial Relations Section has been engaged in the following major projects:

1. *Development of Supervisors and Executives.* Activity continues in the field of supervisory and executive development. Though the development of managers has long been recognized as a problem by local firms, additional interest in this subject has come about as a result of the expansion and diversification of the Southern California economy and the increased competition for employees with training, skill, or potential.

Working with companies both large and small in many industries, the Industrial Relations Section has contributed to the development of supervisors and executives by:

a. Facilitating the exchange of ideas and experiences in this field through the use of its library and through a series of meetings and conferences.

b. Aiding the personal growth of individuals charged with the responsibility for supervisory and executive development.

c. Organizing evening meetings and summer conferences for supervisors.

d. Developing methods of training and instructing company representatives in their use.

e. Preparing materials to be used in developing supervisors and executives with specialized functions such as working with scientific and engineering personnel.

2. *Surveys of Employee Opinion.* On the basis of data from 38 surveys in 26 different companies, the Section has formulated the following tentative conclusions:

a. Employee morale depends more on the immediate supervisor than on company policies.

b. Supervisory training can improve the performance of supervisors to a degree that is noticeable to employees. Follow-up surveys of employee opinion, made two to four years after the original survey, indicate a substantial improvement in those cases where the company has undertaken a program of supervisory development, despite the tendency of employees to feel freer to express critical remarks and opinions on the second poll.

c. Most employees want their supervisors to discuss their performance with them periodically. While employees expect to receive work assignments, suggestions, reprimands, and commendations when earned, these day-to-day discussions do not take the place of periodical appraisals of their work as a whole. Supervisors usually do not offer such appraisals unless the company provides for them by instituting appropriate policies and procedures, including forms and follow-up. Most supervisors need training in how to make these appraisals and how to discuss them with their employees.

In the companies where these opinion surveys have been conducted, significant improvements are being made in personnel policies and procedures, benefit plans, communication between management and employees, and supervisory training.

As a basis for further research, the Industrial Relations Section has improved the techniques of polling to make it possible to study various groups of employees such as engineering and professional, craft and maintenance, accounting, clerical, sales, and management. Other changes will permit the study of leadmen and other levels of supervision.

An independent unit, the Benefits and Insurance Research Center, was established within the Industrial Relations Section in December, 1955, to provide an intensive and continuing study of various plans of employee benefits. While the traditional forms of employee benefits, such as workmen's compensation and group life insurance, have been in existence for many years, many other types are of fairly recent origin: old age and survivor's insurance, pension plans, unemployment and disability insurance, hospital and surgical insurance, health and welfare funds, major medical coverage, and guarantees against wage income loss, such as supplemental unemployment benefit plans and security benefit accounts.

Despite the vast growth of benefit and insurance programs and the developing interest in the field, continuing research and teaching have been lacking, on the whole. To meet the need for the collection, analysis, and dissemination of information in this field, the Benefits and Insurance Research Center has set the following objectives for its program: (a) Basic research; (b) study and analysis of current situations; (c) annual analysis of specific programs; (d) full-time conferences on special problems; (e) special discussion meetings; (f) courses for the development of specialized personnel; and (g) publications.

Research by the Center has been directed initially toward the general subject of unemployment insurance and supplemental unemployment benefits, and two studies dealing with supplemental unemployment benefits are nearing completion. The first of these explores various measures by which security against income loss might be supplied other than the insurance type of plan integrated with state unemployment insurance systems.

The second of these studies examines the integration of private plans with state systems, the background of this development, and its economic effects.

Research is also under way on specific aspects of the California unemployment insurance program, including eligibility requirements and experience rating, and the disability insurance program in California during the past decade.

Cornell University

New York State School of Industrial and Labor Relations

M. P. Catherwood, Dean

Leonard P. Adams, Director of Research and Publications

Projects Recently Completed

1. *Jobs and Workers in India*, by Oscar A. Ornati. This survey of labor problems, unionism, and labor conditions is intended to serve as a guide to further research in this area.

2. *The Industrial Mobility of Labor as a Probability Process*, by Isadore Blumen *et al.* An analysis of the OASI Continuous Work History Sample to determine whether a stochastic process model can be constructed for predicting such phenomena as interindustry worker mobility.

3. *Empire in Wood*, by Robert A. Christie of Lafayette College. A history of the Brotherhood of Carpenters and Joiners, with particular reference to the impact of technology on the union's government and jurisdiction.

Work in Progress

Current projects in the fields of human relations and personnel administration are:

1. Professor William F. Whyte is preparing a manuscript based on his recent experience with the Creole Petroleum Company in Venezuela. This study focuses on the social and cultural factors involved in employee relations under foreign ownership and management.

2. Temple Burling is planning a study of the personality requirements of jobs. The study will attempt to isolate the personality variable from other elements in jobs and will examine the extent to which this variable can be adapted to differences in workers' emotional needs and capacities.

3. Professor Harrison Trice is preparing for publication some of the results of his study of the problem drinker in industry. This study is focused particularly on the factors that differentiate persons who are able to enlist in self-help organizations, such as Alcoholics Anonymous, from those who are unable or unwilling to seek such assistance. Professor Trice expects to continue these studies in the near future.

4. Professor Robert F. Risley and Miss Joan Murray, Research Associate, are completing a study of personnel policies and practices in retail stores in New York State. The study, which included approximately 550 stores located throughout the state, has aimed at defining the present nature of personnel organization, procedures, and policies in New York State retailing; analyzing differences in personnel organization, procedures, and policies by type, location, and size of stores; and identifying such problems as recruitment, selection, training, wage structure, etc., and pointing the way toward their solution.

Work in the fields of collective bargaining and labor economics includes the following projects:

1. A study by Professor Vernon Jensen of the history of governmental mediation and arbitration in New York State. One of the main findings of this study is that the concept of arbitration, in its early usage, was virtually synonymous with union recognition. Professor Jensen is also engaged in a study of employment stabilization and labor relations in the Port of New York.

2. Donald E. Cullen is making a study of labor relations at the site of the St. Lawrence seaway and power project. The study will focus particularly on union policies with respect to hiring and wages.

3. Professor Fred Slavick has revised the draft of his study of the adequacy of the medical care provisions of collectively bargained health and welfare plans. The study, which was made in an upstate New York industrial community, shows that the plans are most adequate in meeting the costs of hospitalization, least adequate with respect to surgery and out-patient care.

4. Professor N. Arnold Tolles has in progress a study of the factors influencing wage policies in the twentieth century. The study will pay particular attention to the influence of broad social and political as well as economic influences on wage policy.

5. Professor Jean T. McKelvey is editing a series of studies of umpire systems in the mass-production industries. This project, which is being sponsored by the National Academy of Arbitrators, will attempt to compare and appraise the impact on collective bargaining of ad hoc and permanent umpire systems in the industries studied.

6. Professor Robert L. Raimon is nearing completion of his study of apprenticeship and occupational wage structure. This study attempts to evaluate the impact of the long-term compression of the wage structure on the recruitment of apprentices to skilled trades. Professor Raimon is planning further studies on the supply of skilled labor.

7. Professor James Morris is revising the manuscript of a study of the origins of the CIO. The study points up the historical relationship between the Brookwood Labor College and the subsequent development of the international unions and organizing committees of the CIO.

8. Professor Jesse T. Carpenter is continuing his study of arbitration in the New York City garment industry.

WESTERN RESERVE UNIVERSITY

PSYCHOLOGICAL RESEARCH SERVICES

Jay L. Otis, Director

Projects Recently Completed

Relation of Format and Administration to the Characteristics of Graphic Rating Scales. Directed by Erwin K. Taylor and Roy Hastman. This project, sponsored by the Office of Naval Research, was designed to investigate whether by varying the traditional format and administration of graphic rating scales, an improvement in discrimination among good and poor workers could be obtained. Using a sample of some 400 employed clerical personnel, no significant differences among different types of administration appeared. This may have been due to the fact that the scales used were well constructed, and the sample well chosen. Use of an experimental situation as opposed to a "for

keeps" situation in this study may have been responsible for the fact that no one administration or format seemed to produce distributions which were significantly different from any of the other formats or administrations.

Work in Progress

1. *Establishment of Normative Data on Certain Personality Tests for Use with Applicants for High-Level Jobs.* Directed by Joel T. Campbell and Erich Prien. These norms will be based on personality test scores obtained by applicants for high-level jobs who have been tested in the Personnel Research Institute's personnel appraisal program over the past two to three years. It is expected that these data will be of value in various assessment procedures, such as objective tests, projective tests, various kinds of interviews, and observations in a wide variety of social situations.

The study will involve a follow-up of high school seniors during their college careers and on to their first full-time jobs. It should provide much information about the usefulness of various psychological measures for determining individual potentialities, and the conditions under which certain individuals achieve maximum adjustment.

2. *Relation of Attitudes Towards Jobs to Certain Personality Measures Used in Assessment.* In this study, applicants for high-level jobs will be given in addition to such personality measures as the Thematic Apperception Test, the Guilford-Zimmerman Test and the Sentence Completion Test, a questionnaire measuring attitudes toward jobs. The relationships between the attitude questionnaire and the other measures will be studied.

3. Work is continuing on the following projects previously reported in PERSONNEL:

Research in Predicting Normal Adjustment from Written TAT Protocols, directed by Erwin K. Taylor and Joel T. Campbell.

Interest and Attitudes of Pre-Retirants and their Relation to Mental Health Adjustment in Work and Retirement, directed by Erwin K. Taylor and G. Laverne Freeman.

UNIVERSITY OF PENNSYLVANIA

INDUSTRIAL RESEARCH UNIT

Gladys L. Palmer, Director

Projects Recently Completed

From Merchants to "Colour Men"—Five Generations of Samuel Wetherill's White Lead Business, by Miriam Hussey. This study covers the history of the Wetherill companies, managed by Samuel Wetherill and his descendants in Philadelphia from 1784 through 1896, and is based on the original account books and correspondence. Data on employment, earnings, and labor turnover are presented for the years 1848 through 1896. Other chapters of the study cover sources of supplies, the manufacturing process, the volume of sales, and the methods of conducting the business.

Work in Progress

1. The current program of the Industrial Research Unit is concerned primarily with the nature and degree of work attachments in the labor force. Work is in progress on several sets of data already available and these will be supplemented by special field studies. Further analysis of data collected

for the study of labor mobility in several large cities, provides information on why workers remained in an occupation (the period covered is from January, 1946, through December, 1950) and how long they stayed in various kinds of occupations. The evidence suggests that a scale of work attachment must provide for "acceptance of" or identification with an occupation, as well as for dislike, indifference, or liking. While there is a segment of workers at each level of skill for whom the function of work is more than "just earning a living," the relative size of that segment declines as one descends the "occupational ladder" in both manual and non-manual occupations.

Related to these studies is an analysis of attitudes to jobs, original and current vocational aspirations, and concepts of "success" in life, as indicated by a sample representing one adult per household (randomly selected) in a small industrial community in the Philadelphia metropolitan area. Complete work histories are also available so that work careers over a lifetime can be compared with a number of attitudinal responses. Both these studies cover all types of occupations.

2. Work has also been started on the records of men employed as tool- and diemakers in Philadelphia in 1924, 1936, and 1951. In addition to some information on attitudes to the occupation as a work career, the records contain valuable data and comments on apprentice training.

UNIVERSITY OF UTAH

DEPARTMENT OF PSYCHOLOGY

Calvin W. Taylor, Principal Investigator

Projects Recently Completed

1. ***The Identification of Creative Scientific Talent.*** A national research conference with 19 participants selected on a national basis was held under the direction of Calvin W. Taylor with financial support from the National Science Foundation. An almost verbatim report of the three-day conference has been completed and will be available through the University of Utah Press. The final 268-page report contains papers from all participants, the group's discussion on each one, and committee reports from subgroups outlining future research needed in the three main areas of the conference topic.

2. ***The Development of Training Needs Tests for Aircraft Specialists.*** Directed by Calvin W. Taylor, M. D. Bown, and Frank Q. Sessions. In this project, conducted under the auspices of the Personnel Laboratory, Air Force Personnel and Training Research Center, tests were developed for three ground crew specialties: photo equipment repairman, autopilot specialist, and weapons mechanic. The training needs tests yield a profile of scores across various areas of the job so that weaknesses of a worker in any job area can be readily identified and training aimed directly at each area of weakness can be applied.

Work in Progress

1. ***Identification of Communication Abilities in Military Situations.*** Work on this project was accomplished mainly by an interdepartmental team of Calvin W. Taylor and William R. Smith, Psychology; Brewster Ghiselin, English; and Boyd Sheets and John R. Cochran, Speech. This series of three studies, which is being performed under contract with the Personnel Laboratory, Air Force Personnel and Training Research Center, was designed to determine communication abilities in people. Two large factor studies were

made to explore many areas of communication abilities, after which a reduced test battery was validated against 19 situational tests resembling communication situations typically found in the Air Force. The final report is now being written.

2. *Comparison of Two Tests for the Universal Camera Control System.* Directed by Calvin W. Taylor and M. D. Bown, this project is being undertaken under contract with Personnel Laboratory, Air Force Personnel and Training Research Center, to compare two sets of training needs tests and job descriptions for the same job. One set was constructed when a new, complex piece of equipment had just been developed but had not yet been installed in the organization. The other set was developed after the equipment had been used for a considerable period.

3. *Development and Evaluation of K-System Trouble-Shooting Performance Testing Procedures.* Directed by Calvin W. Taylor and H. W. Gustafson. This study, under auspices of the Maintenance Laboratory, Air Force Personnel and Training Research Center, is designed to build performance tests which will effectively measure the trouble-shooting behavior of repairmen on certain electronic equipment.

University of Wisconsin

Bureau of Industrial Psychology

C. S. Bridgman, Director

Projects Recently Completed

1. *Salesman Selection Test Battery.* Professor C. S. Bridgman and Project Assistant Max Spaethe have completed a follow-up study of a salesman selection battery. A brief summary of the results is available on request.

2. *Work Sample Test.* Professor Dale W. Dysinger has carried out preliminary trial of a work sample test and other standard tests on experienced employees. Results indicate that the tests may be of help in selecting employees for meat packing operations.

Work in Progress

Utilization of Opinion Survey Information in Supervisory Training. Professors Bridgman and Dysinger and Project Assistant Spaethe are working with the personnel department of a local concern on methods of incorporating opinion survey results into the supervisory training program.

University of Washington

Institute of Labor Economics

William S. Hopkins, Director

Projects Recently Completed

The Teamsters Union on the West Coast, by J. B. Gillingham. An analysis of the structural developments, collective bargaining policies, jurisdictional relationships, internal government, and ideology of the Teamsters Union in the Western states, with primary emphasis on the Pacific Northwest. Attention is given to wage policies and their determinants, and to the role of the Union in stabilizing small-scale, highly competitive industries such as trucking and dry

cleaning. Considerable attention is also given to the nature and significance of the leadership role and policies of Dave Beck.

Work in Progress

The Employment of Older Workers. Begun as a contribution to a larger study by the U. S. Bureau of Employment Security, this study is investigating many phases of the employment and unemployment problems of older workers of both sexes.

The Pennsylvania State University
College of Business Administration
Bureau of Business Research
Earl P. Strong, Director

Projects Recently Completed

1. *How to Increase Office Productivity*, by Earl P. Strong. A practical manual demonstrating six proven techniques for increasing office productivity.

Work in Progress

The following projects, previously reported in PERSONNEL, are still in progress:

1. *Employee Personnel Practices in Colleges and Universities*, by Henry Haranin.
2. *The Shamokin Plan*, by Raymond Lauer.
3. *Arbitration of Labor Disputes: An Economic Appraisal*, by David Le Sourd.
4. *The Federal-State Jurisdiction Problem in Labor Relations: The Pennsylvania Experience*, by Alice Warne.

The University of Texas
Bureau of Business Research
John R. Stockton, Director

Projects Recently Completed

Personnel Practices in Department Stores, by William R. Spriegel and E. Lanham. A survey of the scope of personnel administration in some leading department stores of the United States. Present-day practices and policies in personnel management are compared with those found in a similar survey by William R. Spriegel and Joseph W. Towle in 1947.

Work in Progress

1. *Compensation Plans for Retail Salespeople.* The purpose of this study, by Jarrett Hudnall, is to determine methods of payment most frequently used by Texas department and specialty stores, and levels of payment to salespeople.
2. *Compensation Plans for Wholesale Salesmen.* A study, by Kenneth Green, of methods of payment and levels of payment to outside salesmen in Texas wholesale firms.

3. The following projects, previously reported in PERSONNEL, are still in progress:

The Organizational Planning Function in a Selected Group of Companies, by Ross Henderson.

Industrial Engineering Departments in Selected Companies, by William B. Horner.

Salaries of Men and Women in Higher-level Positions in Business, by Lola B. Dawkins.

STEVENS INSTITUTE OF TECHNOLOGY

DEPARTMENT OF INDUSTRIAL ENGINEERING

Arthur Lesser, Jr., Director

Work, Workers and Work Measurement, by Adam Abruzzi, Professor of Industrial Engineering, was published this fall. Dr. Abruzzi, who was awarded a Guggenheim Fellowship for a year's study in Italy in May of this year, will continue his research on the effect of industrial codes and industrial technology on the theory of work.

Work Stoppages—1955

THE IMPROVEMENT in economic conditions in 1955 was responsible for an upturn in strike activity, according to the latest report of the Bureau of Labor Statistics. Stimulated by the rise in employment and output, as well as by the expiration of many long-term agreements, work stoppages increased about 25 per cent over 1954 but their total remained substantially below postwar peaks. Though the number of workers involved and the amount of time lost in work stoppages also exceeded the figures for 1954, man-days of idleness added up to only about one-fourth of 1 per cent of total time worked during the year, and the average duration of stoppages was shorter than in any other year since World War II except 1951.

In major industries, with some exceptions, bargaining was relatively peaceful and no industry-wide stoppage lasted more than one or two days. A settlement was reached in the majority of cases without the assistance of an outside agency, and at no time during the year were the emergency provisions of the Taft-Hartley Act invoked.

Heading the list of issues in dispute were wages and supplementary benefits, accounting for half the stoppages and about two-thirds of the number of workers involved, with union security and related issues a close second. Jurisdictional disputes and other forms of inter- or intra-union conflict were relatively insignificant.

THE PERSONNEL BOOKSHELF

AUTOMOBILE WORKERS AND THE AMERICAN DREAM. By Ely Chinoy. Doubleday and Company, Inc., Garden City, N. Y., 1955. 139 pages. $3.00.

Reviewed by John M. Pfiffner*

The reviewing of books in the social sciences for a management audience presents certain difficulties. As Barnett has recently pointed out, the aims of the social scientist usually differ from those of management and the one may distrust the motives of the other. While the social scientist is interested in knowledge for its own sake, management seeks information which has an immediate application to organizational goals.

The same situation arose when the natural sciences were first applied to the practical problems of factory, farm, and market place. Today, however, in order to attract the best brains, management has been compelled to revise its attitude toward the scientist. The firms which are most advanced technologically have found not only that the scientist must be given an opportunity to pursue knowledge for its own sake, but that such a policy pays off ultimately in dollars and cents. Furthermore, progressive managements realize that researchers in the natural sciences must be permitted to challenge the cherished credos of the operating organization. Will the social scientists be accorded the same freedom?

This question arises with greater urgency in view of the social scientists' increasing concern with management problems. In recent years, a number of case studies of human relations in specific industries have appeared—Blum's study of a meat packing plant, for example, and Walker and Guest's investigation of human behavior on an automobile assembly line. Added to these now is Chinoy's study of a selected sample of automobile workers which inquires into attitudes and motivation with particular reference to the workers' views of their own mobility in the economic system and in the factory's job hierarchy. The study is based on depth interviews conducted in 1947 and follow-up interviews in 1951.

To reassure the reader at the outset, it should be stated that the auto workers studied fully accept the American credo of economic opportunity and upward mobility. Their viewpoints are middle-class rather than proletarian. Nevertheless, their own achievements and career outlooks are at variance with this concept. Their goals are confined to rather narrow limits, such

* Professor of Public Administration, University of Southern California.

Books on industrial relations which are of general management interest are regularly reviewed in THE MANAGEMENT REVIEW.

as being upgraded in their present jobs. They do not aspire even to the apprenticeship required for entry into the skilled category, partly because of the initial sacrifice in pay involved, and partly because their educational preparation is inadequate. Few desire to become supervisors, and none envisage themselves as future executives. Their most urgent motivation is to get off the assembly line into some other job in the plant. While their fantasies may run to having a farm or a small business of their own, rarely does anyone actually achieve this goal. Fathers hope that their sons will not enter the plant, but the boys usually do so because they earn almost as much pay as their fathers within a very short time. As for improving their financial prospects, the workers' attitude is that any advance depends upon general pay increases secured through collective bargaining rather than on individual progress up the job hierarchy.

What do studies of this kind have to offer to personnel managers? Relatively little, perhaps, if one is looking for facts which can be put to immediate use. Even if we take the longer view, perhaps nothing can ever be done to remedy some of the problems indicated by such studies—it may very well be, for example, that working on an auto assembly line or putting sausages into casings can never be enjoyable, and that such routine jobs will always be regarded as something to be endured just to get the money to buy the pleasures of life. Ominously enough, one hears it said more and more frequently that Huxley's *Brave New World* is actually coming to pass in our lifetime, and that his Soma drug is the forerunner of our tranquilizers. Could it be that the breeding of human robots is not too far off?

Nevertheless, though these social science studies will often irritate management, just as the anthropologists used to nettle colonial administrators, they perform a valuable function in bringing to the surface the underlying problems which cultural myths serve to conceal. In these days of automation, have we not learned that a machine may have to be scrapped, even though it may still work? A culture is not unlike a machine in this sense. It may need to be inspected and even overhauled at some points, and its myths may outlive their usefulness. In probing the foundations of our industrial culture, the social scientists have a positive contribution to make. After all, was not Taylor himself a social scientist of sorts?

WORKER SATISFACTION AND DEVELOPMENT: ***A Case Study of Work and Social Behavior in a Factory Group.*** By A. Zaleznik. Harvard Graduate School of Business Administration, Boston, Mass., 1956. 163 pages. $2.00.

Reviewed by Stanley E. Seashore*

This account of how a work group in a factory managed to achieve social stability and a reasonable level of productivity despite a number of obstacles to both is primarily concerned with the adaptability and resilience of the human group. Its secondary theme is the impact of managerial practices on group behavior.

From his observations of a single department in an instrument factory, the author gives a detailed account of how the 14 men of varying educational and racial backgrounds who made up the group—all of them engaged in different tasks, and possessing widely differing personalities—found ways of satisfying

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their need for warm human relations and for help in getting out the job. Leadership emerged from within the group to meet a demand that had not been recognized or satisfied by management. Elaborate patterns of social behavior were evolved to accommodate individual personalities within a stable social framework. Ways of achieving a tolerable adjustment with the "isolate," the "deviant," and the ineffective foreman were developed. Instead of the chaos and conflict that might well have been expected, the group manifested orderly and stable relationships, and achieved a level of productivity at all events minimally satisfying to management.

The "success" of this group is attributed by the author to forces and resources inherent in the group itself rather than to management. Aside from the provision of physical facilities and a task to do, the role of management in this situation (and, by implication, in many other situations) was either neutral or unintentionally obstructive. This leads the author to the hypothesis that, in the absence of major constraints, any work group will spontaneously order its relationships to assure its own survival. Survival, in turn, rests upon meeting the minimum expectations of management regarding productivity, and upon satisfying the social needs of the members to the extent that the work situation becomes tolerable.

There is some small comfort for management in this proposition, for it seems to imply that a minimum satisfactory level of productivity can be obtained without managerial prodding or control over the interpersonal relations within a work group. The work group, in terms of social relationships, is viewed as a self-regulating organism that will maintain itself—avoid disruption—unless there are positive constraints against self-maintenance. Hence, any manager, it would seem, can make out fairly well if he (1) organizes the work so as to permit a degree of free "interaction" among the men; (2) provides immediate supervision of a kind that is expected by the men and does not introduce tensions between supervisor and workers; and (3) allows the group freedom to work out its own way of dealing with "difficult" group members.

But there is a challenge in this proposition also, for it asserts that, in the absence of positive managerial support and stimulation, the work group will become "frozen" at a minimum level of output and quality. While the group, in reasonably favorable circumstances, can provide social satisfactions for its members, it is not inherently creative nor can it help the individual member to develop himself. Invention, change, personal growth—toward all these, the group is passive, or even resistant, unless there are stimulation and positive leadership from outside.

This book reflects the strong trend among managers—a trend that is reinforced by the findings of current research—toward a reappraisal of the traditional concepts of managerial theory and leadership practice. Particularly for those concerned with leadership and the training of leaders it has important implications, some of which are suggested by the author.

Briefer Book Notes

[Please order books directly from publishers]

LABOR: *Institutions and Economics.* By Alfred Kuhn. Rinehart & Company, Inc., New York, 1956. 616 pages. $6.50. This textbook, emphasizing institutions and processes rather than doctrinaire formulas, offers a fresh approach to familiar problems and should be of interest to the professional in this field as well as to the student. The author gives somewhat more than the usual amount of attention to such critical areas as the power relationship in collective bargaining; the structure and goals of management; the effects on bargaining of different types of business organization and cost structures; and the reconciliation of theoretical and institutional approaches to wage determination. Also included is a detailed analysis of recent developments in the field—the AFL-CIO merger, GAW, and automation, among others—and an evaluation of their long-term prospects.

MAN AND AUTOMATION. The Technology Project, Yale University, New Haven, Conn., 1956. 117 pages. $2.00. This report, the proceedings of a conference sponsored by the Society for Applied Anthropology at Yale University, contains papers and discussions by a cross-disciplinary group of social scientists on the human and social impact of automation; the role of government, management, and labor in automation; and the issues posed for industrial relations research in this area.

PSYCHOLOGY OF INDUSTRIAL BEHAVIOR. By Henry Clay Smith. McGraw-Hill Book Company, Inc., New York, 1955. 477 pages. $6.00. An introductory textbook, intended for industrial practitioners as well as students. In it the author examines the human problems of modern industry and takes inventory of the tool kit available to the industrial psychologist for exploring such areas as motivation and work satisfaction, counseling and placement, training methods, disciplinary procedures, prediction of behavior, and consumer attitudes.

PROCEEDINGS OF THE EIGHTH ANNUAL MEETING, INDUSTRIAL RELATIONS RESEARCH ASSOCIATION. Edited by L. Reed Tripp. Industrial Relations Research Association, University of Wisconsin, Madison 6, Wis., 1956. 385 pages. $3.00. Included in these proceedings are papers and discussions on major trends in American trade union development; state and federal jurisdiction in labor relations; company research in industrial relations; German experience with codetermination; unemployment compensation; labor monopoly; foreign labor movements; and decision making in local unions.

INTER-INDUSTRY LABOR MOBILITY: *The Case of the Displaced Textile Worker.* By William H. Miernyk. Bureau of Business and Economic Research, Northeastern University, Boston, Mass. 1955. 158 pages. $2.75. This study, sponsored by the New England Textile Committee and based on case studies of displaced textile workers in six labor market areas in New England, offers new data on the problem of labor displacement in a declining industry. Contrary to the long-run assumption of classical economic theory, the author concludes that displaced workers are not readily absorbed in other industries. Though limited to one industry and one region, the report suggests a number of implications for labor market theory and policy.

PERSONNEL ADMINISTRATION IN GOVERNMENT. By Norman John Powell. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1956. 548 pages. $6.50. The aim of this study,

in the words of its author, "is to depict the technicalities of public personnel administration in an embracing institutional and political perspective." Among the subjects discussed are the expansion of bureaucracy, community attitudes toward bureaucracy, politics and the merit system, the ethics of public service, security procedures and civil liberties, and a comparison of public and private personnel management.

SCIENTIFIC SOCIAL SURVEYS AND RESEARCH. By Pauline V. Young. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1956. 540 pages. $6.50. The third edition of a work intended both as a textbook for students and as a reference volume for administrators and research workers. The text has been revised and expanded to take account of new developments in research techniques and contains some additional contributions by specialists in this field.

AN OUTLINE OF SOCIAL PSYCHOLOGY. By Muzafer Sherif and Carolyn W. Sherif. Harper & Brothers, New York, 1956. 792 pages. $6.00. This revised edition, incorporating substantial changes in the original text, offers extensive new data drawn from the authors' experimental studies of social groups.

PERSONALITY AND GROUP RELATIONS IN INDUSTRY. By Michael P. Fogarty. Longmans, Green & Co., Inc., 55 Fifth Avenue, New York, N.Y. 1956. 341 pages. $6.00. An analysis of industrial relations from the point of view of the social scientist. While making no claims to problem-solving at the practical level, this study examines a number of questions which have a practical aspect for management. How is personality related to job adjustment? What factors make for a good work team? How do groups change with increasing size and specialization? A number of case histories and research findings from actual industrial situations illustrate the author's propositions.

CHARTER FOR THE AGING. New York State Governor's Conference on Problems of the Aging. 1956. 659 pages. $3.00. This volume contains the papers presented for discussion at the 1955 Conference and the final recommendations of the Conference Committees. Among the topics covered are employment, education and recreation, health, housing, retirement policies, the role of religion, and private and public care of the aging.

THE LAW OF INVENTING IN EMPLOYMENT. By Jasper Silva Costa. Central Book Company, Inc., 261 Broadway, New York 7, N. Y. 1953. 336 pages. $7.50. A comprehensive analysis of judicial decisions by American courts defining the rights and obligations of employers and employees with respect to inventions made by employees during the course of their employment.

A PREDICTIVE STUDY OF ADMINISTRATIVE WORK PATTERNS. By Ralph M. Stogdill *et al.* Bureau of Business Research, The Ohio State University, Columbus, Ohio, 1956. 68 pages. $2.00. This monograph is designed to answer the question, "Can predictions of future job behavior be improved by taking into account the nature of the job to be done, as well as the nature of the man who is to do the job?" The investigators studied the behavior of Navy officers being transferred to new positions and found that some forms of behavior tend to be carried from one position to another, while others tend to resemble the performance of the previous occupant of the job. Their findings should be of interest to those concerned with the selection and training of executive personnel and the prediction of future job behavior at this level.

Readers' Forum

Fringe Benefits: Their Relationship To Wage Rates

To the Editors:

In a recent article in PERSONNEL[1] Professors Crisafulli and Sufrin reported a very low relationship (correlation of +.10) between the amount of straight-time wages and the amount of fringe benefits paid by 15 companies in the Mohawk Valley of New York. Their survey of these companies was made in 1953 during what they term "a rather depressed industrial market." Although they implied that their sample was somewhat limited, they concluded that "the results are sufficiently at variance with the generally, and perhaps uncritically, accepted conceptions about wage and fringe policies to warrant some doubt being cast upon the idea that the larger, better-paying companies also lead the parade in fringe benefits."

What the authors failed to mention was that a much more comprehensive survey, conducted in the same year by the United States Chamber of Commerce,[2] presented results which lead to a very different conclusion, viz., that there *is* a substantial relationship between wages and fringe benefits paid. This survey covered 940 companies throughout the United States, grouped into 20 different industries—14 manufacturing and six non-manufacturing. The results showed that petroleum companies paid the highest hourly wages of the 20 industries and granted the most liberal fringes (computed in cents-per-payroll-hour). In contrast, hotels offered the lowest hourly pay and the least fringe benefits.

It may be argued that different methods of computing fringe benefit costs could account for the differences in the results of the two surveys. To make the surveys comparable in this respect, the employer's share of such legally required payments as unemployment compensation, workmen's compensation, etc., should be subtracted from total fringe payments as reported in the Chamber of Commerce survey. The wage and fringe benefit rates for all 20 industries, computed on this basis, together with each industry's rank on these rates, are shown in the accompanying table. Although the agreement of ranks is obviously not perfect, the rank-order correlation is +.568. This value is statistically significant at the 1 per cent level of confidence, and is considerably higher than the index of +.10 found by Crisafulli and Sufrin.

It should be added that the fringe items included in the table cover approximately the same types of benefits as those in the Crisafulli-Sufrin study (paid holidays and vacations, pension plans, discounts on goods and services, etc.). In fact, the range of fringe payments ($.135 to $.510 per hour) is strikingly similar to the range of $.145 to $.522 shown in Table 2 of the Crisafulli-Sufrin article.

On the basis of the Chamber of Commerce study, there is reason to conclude, therefore, that the relation-

[1] V. C. Crisafulli and S. C. Sufrin, "Fringe Benefits: Are They Related to Wage Rates?," PERSONNEL, May, 1956. pp. 533-37.

[2] *Fringe Benefits—1953*, Chamber of Commerce of the United States, Washington, D. C., 1954.

*Relationship of Straight-Time Earnings and Fringe Benefits in 20 Different Industries**

1953

	Straight-Time Earnings		Fringe Benefits	
Manufacturing	*Amount*	*Rank*	*Amount***	*Rank*
Food, beverages, tobacco	$1.636	12.5	$0.284	8
Textile products and apparel	1.442	18	0.161	19
Pulp, paper, lumber, furniture	1.607	14	0.193	18
Printing and publishing	2.159	2	0.285	7
Chemicals and allied products	1.717	9	0.327	5
Petroleum industry	2.184	1	0.510	1
Rubber and leather products	1.661	11	0.212	17
Stone, clay, and glass products	1.636	12.5	0.214	15.5
Primary metals industry	1.836	6	0.263	9
Fabricated metal products (excluding machinery and transportation equipment)	1.719	8	0.241	13
Machinery (excluding electrical)	1.804	7	0.253	10
Electrical machinery, equipment, and supplies	1.676	10	0.249	11
Transportation equipment	1.852	5	0.235	14
Instruments and miscellaneous manufacturing industries	1.563	16	0.248	12
Non-Manufacturing				
Public utilities	1.870	4	0.349	4
Trade (wholesale and retail)	1.383	19	0.214	15.5
Hotels	1.077	20	0.139	20
Banks, finance, and trust companies	1.605	15	0.429	2
Insurance companies	1.558	17	0.321	6
Miscellaneous industries (coal mining, warehousing, and laundries)	2.034	3	0.379	3

* Compiled from U. S. Chamber of Commerce survey, op. cit.

** Computed as total cents-per-payroll-hour, minus employer's share of legally required payments.

ship of fringe benefits to wage rates is considerably higher than the results indicated by Crisafulli and Sufrin. The fact that the rank-order correlation is not perfect, even in the Chamber of Commerce survey, is not crucial when one remembers that the best-paying industry (petroleum) *does* lead the parade in fringe benefits, and that the least benefits are granted by the lowest-paying industry (hotels).

LEWIS E. ALBRIGHT
Research Assistant
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To the Editors:

Mr. Albright's letter confounds the issue beyond recognition. It was never the major aim of my study to dispute the proposition that higher-wage firms pay higher fringe benefits. The major issue which was under investigation (and which, apparently, we did not make entirely clear) is whether fringe benefits have any influence upon the interfirm dispersion of market wages.

Such dispersion is customarily measured by dividing the interquartile range by the median. The data in my small sample of Mohawk Valley industry showed that fringe benefits *do not* widen interfirm wage dispersion; they seemed to show rather that fringe benefits are more or less neutral. This neutrality of fringe benefits can exist notwithstanding the fact that higher-wage firms may pay *absolutely* higher fringe benefits. To show the contrary, the benefits must also be *relatively higher to the extent that the final dispersion of wages is greater than shown by basic wages alone*. The very data Mr. Albright has submitted afford a perfect illustration of this. The dispersion value for basic earnings *excluding* fringe benefits is 15.6 per cent while for total earnings *including* fringe benefits it is 13.5 per cent. Yet these same data show a coefficient of rank correlation of +.568, meaning that in cents-per-hour terms (though not as ratios of basic earnings, incidentally) the higher-paying industries also pay somewhat higher fringe benefits.

Unfortunately, while Mr. Albright's data provide a perfect illustration of our major working hypothesis, they are not acceptable as proof of that hypothesis. The validity of the proof in any of these analyses depends upon the proper choice of the unit of basic wages, a proper computation of the market value of fringe benefits, and a proper basis of comparison. The data used by Mr. Albright are based on 940 companies grouped into 20 industries. One cannot demonstrate from these data that higher-wage firms pay higher fringe benefits for the reason that low-wage firms in high-wage industries may pay lower wages than high-wage firms in low-wage industries. One must know whether the industry averages reflect a wide range of company wage levels or a narrow one. A second and much more serious objection is that nationwide industrial averages go beyond the normal limits of the labor market and include many labor markets grouped together. For hourly rated jobs, the forces of supply and demand almost exhaust themselves within the local labor market area. In studying the relationships of market wages for hourly rated workers, therefore, the data should be organized on a market-by-market and firm-by-firm basis.

The outstanding studies[1] of fringe

[1] cf. *Computing the Cost of Fringe Benefits*, Studies in Personnel Policy, No. 128, National Industrial Conference Board, New York, 1952 (400 to 600 companies); the biennial studies of the Chamber of Commerce of the United States for 1947, 1949, 1951, and 1953 (940 companies); Austin M. Fisher and John F. Chapman, "Big Costs of Little Fringes," *Harvard Business Review*, September-October, 1954 (some 400 companies); and *Problems in Measurement of Expenditures on Selected Items of Supplementary Employee Remuneration, Manufacturing Establishments, 1953*, Bulletin No. 1186, United States Department of Labor, January, 1956 (550 establishments).

benefits, while comprehensive, do not meet this objection; all of them are nationwide surveys of whole industries. The one made by the Bureau of Labor Statistics, which was not in my possession when the Mohawk Valley study left my hands, comes closest to showing that higher-wage firms may pay not only absolutely but *also relatively* higher fringe benefits (see Table 18, pp. 55-56). However, the data in their present form can only be considered a straw in the wind and may hide as much as they expose. It would be necessary at least to reassemble the data on a firm-by-firm, industry-by-industry, and market-by-market basis in order to really shed light on the major issue under discussion.[2]

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[2] Prof. Robert Raimon would go further and say that the data must be reduced to job-for-job comparisons. See his letter and my rejoinder in the September, 1956, issue of PERSONNEL.

AMA SPECIAL CONFERENCE ON SUPERVISION

An AMA Special Conference on Supervision will be held Thursday and Friday, November 29-30, at the Hotel Biltmore, New York City.

STATEMENT required by the Act of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233) showing the ownership, management, and circulation of PERSONNEL, published bi-monthly at New York, N. Y., for October 1, 1956.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, American Management Association, Inc., 1515 Broadway, New York 36, N. Y.; Editor, Harwood F Merrill, 1515 Broadway, New York 36, N. Y.; Managing Editor, Juliet M. Halford, 1515 Broadway, New York 36, N. Y.; Business Manager, none. 2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) American Management Association, Inc., 1515 Broadway, New York 36, N. Y.; Lawrence A. Appley, President, 1515 Broadway, New York 36, N. Y.; James L. Madden, Treasurer, 1 Madison Avenue, New York 10, N. Y. 3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None. 4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

HARWOOD F. MERRILL, Editor

Sworn to and subscribed before me this 11th day of September, 1956.

NELLIE E. POOLE, Notary Public. (My commission expires March 30, 1957.)

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